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TARIFF THEORY*

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The theory of comparative advantage is perhaps one of the oldest and best established of economic doctrines. The precise incidence of specific interferences with freedom of exchange is not, however, so well known. Neither has there been developed a universally agreed upon technique of investigation for purposes of ascertaining the incidence of taxes, duties, or other price changes. Historically, nevertheless, rough, and for purposes of action, adequate and satisfactory judgments have been made by economists regarding the probable effects of specific tariff rates. The fallacious notions regarding the benefits and burdens of the tariff which have entranced the body politic have not been the result of inadequate knowledge on the part of students of the tariff problem. On the contrary, knowledge has always been in the vanguard of public opinion. Economists, moreover, are generally aware that from a strictly scientific view their judgments hardly ever, if at all, have been based upon the type of knowledge and data regarding costs, prices, supply and demand which a complete and precise application of the theory of prices would require. This gives rise to a number of problems involving the theory of prices, and its application to specific problems.

The pure theory of economics, consisting, as it does, of a body of assumptions and inferences, need not concern itself about either the existence or the availability of concrete data. Applied economics, since it has an existential reference, must, however, confine itself to the data which come within our knowledge and experience. Investigations do not merely "prove" preconceptions. They give rise to new inferences and interpretations. The logical structure of theory, thus, is made to conform to the world of actual experience, and the technique of investigation is adapted to the

* I desire to acknowledge the assistance and advice given to me by Professor B. H. Hibbard at all stages in the preparation of this manuscript.

material. This is analogous to the procedure of other sciences. A micro-chemist, for example, uses a different laboratory technique than does one who deals with cheap materials available in large quantities.

Nevertheless, there occasionally creeps into economics the assumption that applied economics is nothing more than an attempt to verify theories—as if things and relations derived their right to life from the theories about them. On the contrary, facts and relations are independent of our theories. They are the data which it is the function of theory to explain. This is the tradition of economic thought. Since Adam Smith it has been economic situations which have given rise to economic theories. Although it is a human weakness to abstract from the total situation in such a way as to make facts and theory concide, it has not been until the growth of modern statistical method that elaborate technical devices have been used to force or manipulate statistical facts into a straightjacket conformable to a theory. This has sometimes been done under the assumption that an analysis could be made only according to some conventional method. And that if the facts did not fit the theory, it was because of "frictions" or "errors in the data."

It is a misconception of the nature of economic science to assume that there are fixed models of reasoning or of investigation which can be stated in advance. It would be possible to do this only in a completely known universe. So far as we now know, the number of relations among phenomena has no limit and the possible connections are inexhaustible.

The claims that concrete investigations must conform to given patterns, consequently, are either false or without relevance. They are false if they attempt to lay down a priori methods of experiment or discovery. They are true but irrelevant if they merely mean that there are canons of validity by which results can be tested; for all discussion presupposes such canons. It is just such an attempt to prescribe some methods of tariff investigation and to proscribe others that we here need to consider.

In a recent number of this JOURNAL Professor Henry Schultz has laid down a pattern of investigation for ascertaining the effects of a duty.[1] Because the work of the Wisconsin Tariff Research Committee, under the editorial supervision of Professors John R. Commons, Benjamin H. Hibbard and myself, failed to conform to his pattern, he claims that our method is incorrect.[2]

[1] Henry Schultz, "Correct and Incorrect Methods of Determining the Effectiveness of the Tariff," *Journal of Farm Economics*, XVII, pp. 625–641. Referred to below as J.F.E. XVII.

[2] In a footnote p. 625 he shows that he was commenting upon the first five monographs of the Agricultural Tariff Series. These are: Lippert S. Ellis, "The Tariff on Sugar"; Roland R. Renne, "The Tariff on Dairy Products"; Theodore W. Schultz, "The Tariffs on Barley, Oats and Corn"; Charles K. Alexander, "The Tariffs on Pork and Mutton"; Haldor R. Mohat, "The Tariff on Wool." The sixth study, "The Tariff on Lumber" by Edwin Fitch, 1936, was not yet off the press.

The procedure which he alleges has our "blessings"[3] it is said has "no scientific foundation,"[4] and "no scientific validity."[5] Not only that, for in failing to follow the formula pattern we disagree "with the greatest economists of all time" in dealing with a problem "too complicated for the unaided intellect."[6] By the latter is, no doubt, meant a mind functioning without the aid of perception and hypotheses. So that it is assumed that because we did not use the prescribed model of thought, we had no intellectual tools at all. Or perhaps, even, that outside of Schultz's formula, no "correct" method of analysis exists.[7]

II

Many duties are purely nominal and without effect. This was found to be true regarding the major agricultural staples. But it is not true regarding all forms of these staples nor at all places within the United States. Investigation regarding the effect of a tariff begins with the following questions:

1. Is there a differential between the foreign and domestic price?
2. Is this differential due to the duty or to some other factor?
3. Is this differential caused by a fall in the foreign or a rise in the domestic price?

The answer to the last question then enables a computation to be made regarding benefits and burdens.

Sometimes a differential exists between the foreign and domestic prices due to price discrimination, imperfect knowledge of the market, and such other factors. If these are eliminated, there remains the second question: Does the duty create a differential and what is its size? We saw no way of answering this question except by detailed analysis of the facts. It is at this point that the conflict between the method we used and the "correct" method arises. For Schultz seems to know without analysis of fact what the size of the differential "must" be. Indeed, he chides us for attempting to "prove statistically . . . " something which we are supposed to have learned in our elementary "Principles."[8]

And what is the "something" which we should have learned in the "Principles"? This "something" is that, if imports continue, the difference between the foreign and domestic price, called the differential, "must" be equal to the full amount of the duty.[9] There may be Principles extant which, without qualification, make this assertion. But Schultz is correct. We did not learn this type of economics in our Principles. Our procedure was, therefore, dif-

[3] Ibid. p. 638. [4] Ibid. p. 638. [5] Ibid. p. 641. [6] Ibid. p. 633 and 640.
[7] For a recent statement of this problem see Studies in the Theory of International Trade, 1937, Jacob Viner, pp. 591–592 and International Trade by Gottfried Haberler, 1936, Chapter 15.
[8] Ibid. p. 638.
[9] This view he iterates and reiterates, J.F.E. XVII, pp. 626, 632, 637, 638, and 640.

ferent from what it would have been if we had been obsessed by these preconceptions. We did not try to "prove" what "must" be true. That indeed would have been a work of supererogation. And so it must appear still to anyone believing economic theory to be a set of necessary propositions. Holding a different view we merely sought out the actual differential which we found was not always equal to the duty.

This instance illustrates the different conceptions of the nature of theory held by ourselves and by Schultz. To us, for purposes of investigation, economic theory is a series of propositional functions or hypotheses. To Schultz it evidently is a set of necessary propositions which tell us what "must" be true. He refers to it as "the much maligned neo-classical theory."[10] We were wholly unaware that its virtue had been impugned by assigning it to its proper logical place. In making a factual analysis, we did not doubt the logic of economic theory, we merely sought to discover its relevance. But, no doubt, to one who holds theory to be not hypothesis but verity, not a propositional function but a necessary truth, anyone who jolts this realm of essence against the workaday fact, does impudently traduce and deface that realm. We have assumed that "formal."[11] proofs apply only to the validity of inference—not to the nature of reality, and cannot tell us what the facts must be.[12] Where then is the place for facts in a logical system which legislates regarding the nature of reality? In such a system there is no point to investigating whether or not the relations described in certain theories are found in fact.[13] That is why Schultz's epistemology leads him to the conclusion that our results are wrong simply because they conflict with his preconceptions.

The empirical problems which we set ourselves are no problem to Schultz. His formula calls "T_f" the amount of the duty and he uses it for computation without investigating its actual size. "What other finding is possible?"[14] he asks.

We did, however, find the facts to be different than supposed. The sugar differential due to monopolistic tactics of the Cuban Single Seller was not always equal to the full amount of the duty, though we subsequently used the amount for purposes of computation. The wool tariff provided statistical results contrary to what one might expect from a priori analysis. In that case, although it was generally assumed that the duty created a full differential, Mohat found, after allowing for freight and quality that the differential was never the full amount, but averaged from 60% to

[10] Ibid. p. 638. [11] J.F.E. XVII, p. 633.
[12] Schultz says that it is the preconceptions which give "significance to the statistical findings." pp. 635–636. [13] J.F.E. XVII, p. 637. [14] Ibid. p. 637.

80% of the duty.[15] Moreover, although according to marginal theory a full differential should have existed if a substantial amount was imported, the facts seem to be that the price spread varied with the amount imported.

The variations are so great that one economist[16] questions whether there may not be a flaw in Mohat's statistical method. But thus far, at least, neither Mohat nor anyone else has accounted for the wide divergence between the "theoretical differential" and the actual. Now from Schultz's point of view, what Mohat did may have been a waste of time, but whether or not he is correct can only be decided by a further analysis of the facts. Professor Frank W. Fetter points out, that until Mohat showed the contrary, Professor Frank W. Taussig, Dr. Mark Smith, and Professor A. H. Cole, after allowing for quality differentials assumed the price spread on wool to be equal to the duty.[17] This assumption Mohat's analysis seems to upset. The wide divergence between theory and fact or between what Mohat terms "the theoretical effectiveness" and the actual effectiveness seems to indicate that either the marginal analysis in this case is inadequate, or that Mohat's statistics are wrong. As Fetter rightly concludes, this requires further study which he has undertaken. Statements having an existential reference can only be refuted by empirical data—not by inferences from assumptions.

Likewise in no other case of regular or irregular importation was a differential found to be just equal to the size of the duty. The differential was only a part of the duty in the following in-

[15] Mohat, p. 90.

[16] Unpublished manuscript of Professor Frank W. Fetter on "A Note on the Effectiveness of the Wool Duty," used by his permission.

[17] Fetter's statement on this point is particularly appropriate and cogent: "If Mohat's estimates of transport costs, comparability of grades, and premia for skirting and better packing are correct, it would be in line with expectation that domestic wool prices would exceed British prices by the 'maximum theoretical effectiveness of the duty' as long as there was a continuous import of wool. Yet according to Mohat's figures, the finer grade of American wool averaged only 15 cents higher in Boston than the corresponding grade of colonial wool in Boston (ex-duty) or in London, and the ordinary grades of wool only about 20 cents higher, for the period 1923–32. To the present writer the results are so surprising as to demand careful analysis and defense, yet Mohat accepts them without further question as a basis of his subsequent discussion of the benefits and burdens of the wool duty. The results must lead to one of two conclusions: either Mohat's data and methods of analysis are inaccurate, or the almost universally accepted conclusion of economists, that the continuous import of a commodity over a tariff makes the domestic price, in the absence of dumping, higher than the foreign price by the full amount of the duty (with allowance for transport costs), is incorrect. Yet Mohat's analysis shows that with wool continuously imported domestic wool sold above colonial wool of similar grade, with full allowance for transport costs and the difference in packing, by much less than the 'maximum theoretical effectiveness of the duty.' To make the results even more astonishing, Mohat finds that the effectiveness of the duty on fine wool is only 60 percent, but on the other grades about 80 percent. He gives the main cause of this difference as 'the relatively high proportion of our fine wool requirements supplied by domestic producers, making imports of less importance than for the lower grades.' (p. 90) Yet according to accepted analysis, with continuous imports domestic prices should be above foreign prices by the full theoretical effectiveness of the duty whether imports are 20 percent or 90 percent of domestic consumption. Mohat's laudable attempt to make an inductive analysis of the effectiveness of the wool duty has resulted only in confusing the problem still further, because of his failure to meet the issue raised by the great divergence between foreign and domestic price differences, and if the 'theoretical effectiveness' of a duty is correctly determined, it should, with a condition of continuous imports, correspond closely with the actual effectiveness of the duty.

"Only an expert familiar with the intricacies of wool grading and wool marketing would be competent to critize Mohat's inductive analysis. But it seems to the writer tha the sharp divergence between the 'theoretical effectiveness' of the duty and the actual differences between the prices of supposedly comparable grades of American and colonial wool, creates a strong *prima facie* assumption that there is a flaw in Mohat's statistical method."

stances: wool,[18] butter,[19] cheddar cheese,[20] Swiss cheese,[21] milk and cream,[22] casein,[23] barley,[24] oats,[25] corn,[26] pork,[27] sheep, mutton, lamb,[28] logs,[29] and lumber.[30]

I do not deny the validity of a marginal analysis in the realm of pure theory, whether expressed in language, geometry, or algebra. It can be used[31] to demonstrate that when there is an importation of a single pound of sugar, an ounce of butter or a sliver of cheese the domestic price "must" be above the foreign by the full amount of the duty. It can also be demonstrated by the same theory that if a man drags a single log across Puget Sound back of a row boat for sale in Washington there "must" be a full differential in the size of the log tariff. But the facts seem to be to the contrary.[32] If these results are wrong they cannot be proved so by citing the obvious fact that they conflict with assumptions or inferences therefrom. Neither geometry, algebra, nor logic in its pure form has any reference to the experiential world—and can neither prove nor disprove propositions regarding that world.[33] To assume otherwise is to confuse the quality of the propositions of economic theory. If a theory shows what "must" be so about experience, then there obviously is no point to investigation. If its certainty is purely logical, it has no reference to reality. With reference to facts, theory merely shows what the world "may" be, not what it "must" be. Theories therefore are propositional functions and a priori—without detailed evidence to show otherwise in a particular case—they have a value anywhere from zero plus to one. Thus Schultz's propositions show only that the type of result he deduces is possible—not that it is (with reference to events) certain or even likely. Because he seems to hold the view that his judgments possess an apodictic quality for both the internal and external reference, he differs from us widely in his economic methodology.[34]

III

Our analysis of the burden of the duty also varies from the description of it. If we had always used, as alleged,[35] the differential as the measure of the burden upon the consumer, our work indeed would be fallacious. But the fact is that we recognized the tend-

[18] See above. [19] Renne, pp. 40–43. [20] Ibid. p. 107. [21] Ibid. pp. 127 and ff.
[22] Ibid. p. 147. [23] Ibid. p. 160 and ff. [24] Schultz, pp. 39 and 40.
[25] Ibid. p. 56. [26] Ibid. p. 106 and ff. [27] Alexander, pp. 39 and 40.
[28] Ibid. pp. 53–54 and 103–104. [29] Fitch, pp. 86–89. [30] Ibid. pp. 109 and 111 and ff.
[31] J.F.E. p. 626 and ff. For arithmetical proof of this see Part IV, illustration 2.
[32] We should bear in mind that it is at the margin that we observe what happens—not that the transaction at the margin is the "cause" of the differential—though for brevity the proposition is sometimes so put.
[33] On page 640 Schultz reiterates his contrary view: "All that the so-called 'method' can show is that the difference between the domestic and the foreign price . . . " is equal to the duty.
[34] See *Scientific Method in Philosophy*, Bertrand Russell, Chicago, 1915, pp. 8–10, on the function of ogic.
[35] J.F.E., pp. 637 and 641.

ency for the duty to depress the foreign price[36] and on different occasions attributed the price spread wholly or partly to it.[37] Each case required information and inference regarding supply, demand and other factors which constitute the content of the monographs. It was quite unlike the fallacious method attributed to us.[38]

Why did we not use co-efficients of supply and demand, and indicate the mathematically "exact" burden of each duty? We stated our reasons.[39] (1) We believed the methods used by Schultz in the sugar study inapplicable to the period under consideration.[40] There were other independent variables which we were unwilling to class as accidental errors. We did, however, state Schultz's own method and his conclusions so that anyone who preferred "scientific truth" to our figures could make the selection.[41] (2) We believed the methods used in deriving the curves invalid.[42] (3) The 1890–1914 sugar figures were inapplicable to the 1922–1932 situation, and the remaining short period (about 10 observations) was inadequate to derive curves by any known method.

But in any event since the period appears to have been one in which demand was relatively inelastic at the low prices prevailing and the supply of sugar was "controlled" by various activities it appears that these curves were not determinable and the formula method inapplicable. However, our conclusion regarding the actual effect appears to be close to the truth.[43]

In each of the monographs we stated the limitations to which our conclusions were subject. We would have been happier if we had been able in all cases to measure such pertinent facts as the effects of the business cycle, changes in money income at home and abroad, point and rate of injection of new money into the economic system, bounties, overhead costs and such other independent variables which the trend ratio method of deriving demand curves dispenses with by classing as "accidental errors."[44] Here again we were confronted with difficulties easily avoided in pure theory.

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[36] The argument that the tariff depresses the foreign price was made by the Cuban interests (Ellis pp. 20 and 21). For an early discussion of the old protectionist slogan: "the foreigner pays the tax" see *The Theory and Practice of Taxation*, David Ames Wells, New York, 1900, pp. 575–581.

[37] The burden of the sugar duty we said was probably "slightly less than the full amount of the duty" (Ellis, pp. 16, 17, 22, 130, 134, 145, 150, 173). The fluctuating seasonal butter differential was used as the maximum possible burden (Renne, pp. 17 and 57). The same for Cheddar and Swiss cheese (Renne, pp. 115, 131, 138, 141). The spread between Toronto and Chicago due to the mutton and lamb duties was attributed to a seasonal fall in the Canadian price, while the tariff on lamb actually operated as a wool duty (Alexander, p. 54). The log duty destroyed the American market for Canadian logs but the loss was borne either by Americans or Canadians depending upon ownership of British Columbia stumpage (Fitch, pp. 5 and 94). The wool differential was caused by a combination of a rise in the American (80 percent) and a fall in the foreign (20 percent) price (Mohat, pp. XI and XII). Freight rates, not tariff differentials, were used to measure the burden of the fluid milk duty (Renne, p. 155).

[38] Schultz says: "It should be easy by the price differential 'method' to determine the effect of the tariff on the price of each of our numerous dutiable commodities by merely consulting the Tariff Act and a schedule of freight rates." J.F.E. XVII., p. 637.

[39] Appendix A and pp. 118 and 119 in Ellis.

[40] Compare *Some Aspects of the Tariff Question*, F. W. Taussig: 1931, p. 386.

[41] Ellis, p. 118.

[42] Appendix A—This question I hope to discuss further elsewhere.

[43] Compare Taussig, p. 380.

[44] Mohat, pp. 135–138.

It is of course possible to conceive in the abstract that every one of these variables might be incorporated into a formula. Just as it is conceivable that equations can be constructed to include every possible economic event. Interesting as this may be as an exercise in formal logic, it has little significance for political economy. For the latter begins at the point that we can ascertain the factors which are relevant to a given situation. Thus while it is probably impossible in finite time even to denote, except in summary and abstract fashion, all of the factors affecting the price of a commodity, it is at least possible to estimate some of the major causes. A pure theorist may delight, like Pareto, in creating a series of simultaneous equations without solving them for concrete cases and then, lamenting the lack of "rationality" in the public, turn to Fascist dictatorship, emotion and prejudice for his political economy. That is not applied economics; and economists in a democracy must be content with a less ambitious program. They are aware of other forces, but being committed to influencing people by reason and fact and not by passion and prejudice, they need feel no compulsion, in order to furnish guidance upon questions of public policy to pretend to be a priesthood indulging in infallibilities.

In undertaking these studies we confessedly were interested not primarily in abstract logic but in political economy. We consequently emphasized again and again in what ways our analysis was inadequate and how it might be improved were further knowledge available, or supplemented by the work of anyone else more able or perspicacious than ourselves who could isolate and measure quantitatively factors and causes which we failed adequately to handle. In the absence of a knowledge of the quantitative significance of relevant factors there is, however, another method which might have been used. We might have got "scientifically exact" results by using the method of mathematical ignoration to deal with quantities we did not know.

IV

The incidence of the tariff is a problem in price theory. The formula method of calculating the effect of a duty, originally invented by Pigou and used by Schultz and others, is the application of this theory to a given situation. It rests on two suppositions and an inference, common to practically all economic thought. The premises are:

(1) That a knowledge of quantities supplied and demanded at given prices will enable one to predict the quantities exchanged and their prices.

(2) A duty can affect prices and quantities only insofar as it affects the point of intersection of the supply and demand curves in the relevant markets.

The inference is that the effect of a duty can be determined from a knowledge of quantities and coefficients of supply and demand. If, however, both supply and demand are wholly inelastic at all prices: an impossible event in a scarcity economy—or if inelastic within a given range of observation—a probable event—then the equilibrium prices and quantities are indeterminate.[45] For convenience in exposition, I shall henceforth make the assumption that we are dealing with straight lines of such a slope that the prices and quantities exchanged are determinate within the range of observation. If it is possible to determine the equilibrium amount exchanged and the equilibrium price, it follows that the incidence of any known type of event, such as a tax or duty, can also be inferred. This conclusion holds not only for the study of the tariff, but for all other economic problems dealing with prices and quantities. I do not see any ground for doubting its validity and we have accepted it implicitly in all of our studies. It should be noted, however, that this formula is so general in its significance that it applies to all economic events.

For if we knew all of the supply and demand schedules or all commodities and factors of production, there would be no price and quantity problem of which we need remain ignorant. We would be, if not as wise as the Deity, at least as perspicacious as La Place's "all knowing mind." In the absence of such knowledge we must try to be better informed regarding actual events than the proverbial parrot whose repetition of the words "supply" and "demand" shows that he knows "all about economics." Consequently some economists have made the admirable attempt to discover these concrete schedules and in many cases have obtained useful information. Those who have not done so should not be assumed to be denying the principle that price is determined by supply and demand. In competitive price economics that proposition is elemental. If we knew, for example, how a change in wages affected the demand for labor, for its products, for machinery, and for other forms of mechanism and power, we could predict its precise results. If we knew the exact supply of and demand for capital forthcoming in every possible quantity and form for every possible

[45] In using the world "indeterminate" I am following the conventional terminology. That is, if prices and quantities are not inferable from a knowledge of supply and demand curves, we call them "indeterminate. They are not necessarily indeterminate in reality in the same sense that the behavior of an electron may be said so to be. Whatever may be the actual quantities exchanged, they are probably determinate if we only knew all forces causing events in time and space. A lack of knowledge should, therefore, not be confused with the indeterminacy of nature. When economists use "indeterminate" they really mean "unpredictable from a given type of data." The phrase, therefore, indicates merely the ignorance of the economist—not a condition of the universe.

purpose, we could solve the problems of the capital market. If we knew the exact elasticity of output in different industries to correspond to a given change in the volume of money offered for goods, we could predict the effect of monetary policy upon output, prices, wages, capital formation, and the like. These illustrations are not intended to set forth the total conditions necessary to solve particular problems. They are intended merely to illustrate the point that all economic problems of prices and quantities can be subsumed under the formula of supply and demand and that the incidence of a given change can always be predicted if we knew the supply and demand curves.

In analyzing a duty we usually have three types of situations.

(1) A commodity is on an export basis and the domestic price is made in the world market of which the domestic market is a part.

(2) Imports persist in spite of a duty and the domestic price is related to that in the world market—though not always in such a way as might be assumed from a strict adherence to marginal theory.

(3) The tariff or an embargo shuts off foreign supplies and thereby creates an independent domestic market.[46]

In the first instance a knowledge of world supply and demand curves would enable us to predict actual exchange prices. In the second, a knowledge of domestic and foreign curves will enable a prediction to be made of price changes due to a duty. In the third case, we could compute the effect of tariff insulation by a knowledge of the reaction of producers and consumers in the domestic market.

The formula as used by Schultz deals with the second situation, though he indicates[47] how a knowledge of the curves will enable it to be used in the third situation. In the discussion which follows, I shall confine myself to the use of the formula as actually employed by Schultz in the sugar study.[48] His new formulation is not in-

[46] I discussed these three types of problems in Renne, pp. 16–18.

[47] J.F.E. XVII, p. 629.

[48] Statistical Laws of Supply and Demand, p. 199 and ff. The formula and quantities used follow:

$$\Delta P = T_f \frac{I}{1 + \frac{e_D S_D - n D d'}{e'_f S'_f - n_f D_f}}$$

When ΔP = the increment to the price resulting from the tariff.—.86
T_f = tax on the foreign supply.
S_D = domestic supply.—1.96 million short tons
e_D = elasticity of domestic supply.—0.6
Dd = domestic demand.—3.98 million short tons
n_d = elasticity of domestic demand.—0.5
S'_f = total foreign supply.—16.94 million short tons
e'_f = elasticity of total foreign supply.—0.6
D_f = foreign demand.—14.92 million short tons
n_f = elasticity of foreign demand.—0.6

trinsically different.[49] Inserting the quantities derived by examining the period 1890–1914, Schultz gets the following results.

$$(1) \qquad \Delta P = T_f\, 1 + \frac{1}{\dfrac{0.6(1.96) + 0.5(3.98)}{0.6(16.94) + 0.6(14.92)}} = T_f\, 0.86.$$

That is to say, an increase in the tariff of one cent a pound would raise the domestic price by 86% of one cent and lower the foreign price by 14% of one cent per pound.

If we allow the co-efficients to remain constant, and alter the quantities so that only one ton is imported into the United States we obtain:

$$\Delta P = T_f \qquad \frac{1}{\dfrac{\text{U. S. Supply}}{\text{Foreign Supply}} \quad \dfrac{\text{U. S. Demand}}{\text{Foreign Demand}}}$$

$$(2) \qquad 1 + \frac{0.6(3{,}979{,}999) + 0.5(3{,}980{,}000)}{0.6(14{,}920{,}001) + 0.6(14{,}920{,}000)} = T_f\, 0.80.$$

That is, if only one ton of sugar were imported, the domestic price would be raised by 80 percent of the duty and the world price depressed by 20 percent of the duty.

Now, we do not deny that if the markets behaved as Schultz assumes they do and if the supply and demand coefficients are correct this result would follow. What we do question is whether the markets are so perfect that under conditions existing during the importation of 1 ton, at a duty of say, 2 cents a pound, the American price would be raised by 1.60 cents and the world price forced down by .4 cents. Assuming Schultz's coefficients, this means, for example, that if, in the absence of a duty and the importation of even 1 ton of sugar, consumers in the United States were buying their sugar for 4 cents per pound, then the imposition of a 2-cent duty and the continued importation of 1 ton would cause them to pay 5.60 cents per pound. On the other hand if 1,960,000 tons were imported, they would pay 5.72 cents. The world price, on the other hand, would, under the assumptions, drop by .40 and .38 cents respectively. Is a method which gives these results the only "correct" one?

The improbability of these results leads one to ask what is the meaning of "T_f" as used in the formula? From his insistence upon what "must" happen Schultz certainly does convey the impression that he believes that the importation of a single ton would accom-

[49] J F.E. XVII, pp. 626–633.

plish this result. In his book he calls "T_f" the tax on the foreign supply without further explanation. More recently, he seems to assume that it means an historical or statistically ascertained differential,[50] although this latter view is in conflict with his oft-repeated statement that the differential "must" be equal to the duty. At any rate a serious question arises as to the meaning of "T_f" and whether the formula method should be used without defining precisely the meaning.

We may now examine the importance of the elements in the formula—the quantities supplied and demanded and the coefficients of elasticity. This examination will disclose, as shown below, that for practical purposes, in the case at hand, the ratio between the size of the foreign and domestic market is the most important element determining the division of the differential and that, except in extreme conditions, the elasticities are relatively unimportant. We shall show this by two methods:

(1) By holding the elasticities as used by Schultz constant and varying the ratios of quantities between foreign and domestic markets.

(2) By holding the quantities constant and by varying the elasticities.

Retaining the coefficients as given and changing the ratios between the two markets we get the following results:

(3) By doubling the foreign supply and increasing the demand in accordance therewith:

$\Delta P = T_f$ .9257

(4) Triple: $\Delta P = T_f$ .9497

(5) Quadruple: $\Delta P = T_f$ .9620

(6) Quintuple: $\Delta P = T_f$ .9694

(7) Multiply by 1000: $\Delta P = T_f$ .9998

(8) We will now reverse this process, hold the foreign supply constant and multiply the domestic supply by 1000 and make adjustments in the demand in correspondence therewith: $\Delta P = T_f$ .009

These results show that the division of T_f varies chiefly with the size of the two markets. All other things remaining the same, the smaller the domestic market relative to the foreign market the greater will be the rise in the domestic price due to the duty and the smaller will be the fall in the foreign price. (Illustration 2–7.) The greater the domestic market relative to the foreign the smaller will be the rise in the domestic price and the greater the fall in the foreign price (8).

[50] J.F.E. XVII, pp. 639–640.

We will now leave the relative size of the two markets constant and vary the ratio between the elasticities by inserting into the formula various ratios between domestic and foreign elasticities of demand as follows:

$$\frac{0.5}{1.0}\Delta P = T_f\ .8879$$

$$\frac{0.5}{1.5}\Delta P = T_f\ .9113$$

$$\frac{0.5}{2.0}\Delta P = T_f\ .9267$$

$$\frac{1.0}{0.5}\Delta P = T_f\ .7737$$

$$\frac{1.5}{0.5}\Delta P = T_f\ .7115$$

$$\frac{2.0}{0.5}\Delta P = T_f\ .6586$$

From the structure of the formula it is obvious that if the elasticities are the same in the two markets, the actual coefficients are unimportant. That is, if we assume that foreign and domestic markets have practically the same elasticities of supply and demand, it makes no difference in our results whether these be .1, .5, or 10.0. The results will be the same. It is then the ratio of one elasticity to another which makes the difference. But here again we see that except where the ratio is greater than 2 to 1 or 1 to 2, it is so insignificant in its effect on the result that it can hardly be said to have a smaller margin of error than would be obtained by neglecting the coefficients entirely. Now in the case of most basic commodities, it appears quite unlikely that the coefficients of demand vary much more than in a ratio of 2 to 1 between various countries. Schultz himself finds no variation in the ratio of supply elasticities and only an insignificant variation in demand for sugar. We may therefore conclude that if one believes that there is little difference between domestic and domestic and foreign elasticities he can compute the division of the differential rather quickly and with substantial accuracy simply by the use of the Pigou formula with the coefficient of elasticity omitted.

In the study made by Schultz he actually obtained ΔP as T_f .86 including the elasticities in his calculations. He would have obtained ΔP as T_f .843 if he had omitted them—an unimportant difference. This reduces the data required in using the formula to

the tariff rates, freight rates, and the size of the two markets. Schultz has proclaimed how "easy" it would be to determine the effect of a duty on price by use of the first two data.[51] It would take only a few minutes more to include the last item. By use of this simple method he without significantly altering his results could have saved the "time, energy, and money" used to compute supply and demand curves.

Except in cases where it appears highly probable that the co-efficients are the same in the two markets, to neglect them might turn out to be a dangerous procedure. Although I personally do not claim good judgment regarding the fit of curves, statisticians conversant with the procedure of curve fitting tell me that they could readily ascertain (if they used the same type of data as Schultz) by free-hand methods whether the variations between domestic and foreign elasticities were as great as 2 to 1—thus economizing on the effort of making actual computations when they appeared not to be so great. Where, however, these co-efficients appear to be in ratios of 2 to 1, 1 to 2, or greater, they would appreciably affect the result and it would be worth while to fit the curves as well as possible.

The use of the formula method is impossible unless we know the curves of supply and demand. Any kind of supply and demand curves which are used will give an answer. But "the correct" answer can be derived only by the use of correct supply and demand curves which are derived by valid processes and which ignore no significant variables. If these curves are not available some inferences can be made about the relative weight of forces operating in the market. But if the methods that economists have used are "incorrect" then, of course, they can not give trustworthy knowledge.

Schultz evidently affirms this view. "If it is impossible to derive [the supply and demand curves] it is impossible to determine the effect of the tariff on price."[52] In his preliminary statement he says that this method "did not receive its first concrete statistical application until 1928, when I used it to estimate the effect of the tariff on the price of sugar."[53] If it is true that the effect of a duty on price cannot be known except by application of the formula method and that Schultz is the only person up to the year 1928 who had applied this method, then it follows that he was the only person up to that time who was able to reveal the effect of any particular duty on price.

If this be so then neither the classical nor neo-classical econo-

[51] J.F.E., p. 637. [52] J.F.E. XVII, p. 633. [53] Ibid. p. 625.

mists have known the effect of any particular tariff on price. The opponents of the Corn Laws did not know that these laws raised the price of food in Great Britain. The Southern cotton planter must not have been able to estimate the effect of American tariffs on the price of manufactured goods he imported from abroad. Was the great struggle between land owners and industrialists in Great Britain over the tariffs on grain based upon an illusion? Was the struggle of the South against the tariff which helped to bring on the Civil War a revolt against an "oppression" which was a mere fiction? Perhaps so. No doubt in the mind of interested parties the good or bad effects of a tariff have generally been exaggerated.

What can be the meaning of Schultz's position? If he means that he is the only one who professes to have given a precise mathematical answer in terms of equilibrium theory to the incidence of a given duty, he is, no doubt, correct. If, on the other hand, he merely means to assert that no judgment can be made about the effect of a duty without some kind of knowledge of supply and demand elasticities, he is asserting what appears to be necessarily true. But it is a truth of the same generality and significance as the proposition that no knowledge of economic events is possible without a knowledge of supply and demand, in its usual vague simplicity. For supply and demand curves are simply methods of expressing the sum total of all forces affecting economic quantities. Consequently the actual supply and demand curve for any commodity cannot be deduced from the simple assumption that they are positively and negatively inclined and by ignoring all other data which conflict with this assumption. The actual curves are a result of many independent variables.[54]

It is, of course, impossible to know the exact mathematical incidence of a tariff without a precise knowledge of the coefficients of elasticity. But it is also impossible to know the precise effect of a rise in wages, interest rates, prices of raw material, changes in discount rates or any other economic phenomenon which can be mentioned. It follows then that if economists knew nothing about the tariff until they had concrete supply and demand curves they have been equally ignorant about any other concrete phenomenon of quantity and price. This last proposition is a correct inference from the first. If this view is held then economics can be divided into two categories: a pure economics composed of assumptions and inferences; an applied economics based mainly upon coeffi-

[54] See Lionel C. Robbins, The Nature and Significance of Economic Science, pp. 106–112. Also my Appendix A in Ellis.

cients of elasticities and quantities. And since the latter in precise form are usually unavailable, we would have little or no applied economics.

The actual history of political economy has been different. Cobden and Bright when they fought the English Corn Laws were not armed with modern coefficients of elasticity, but they did have the notion that if the duty were removed a cheaper supply of grain would be forthcoming from America. They likewise, seeing the poverty of the English workers, knew that at a low price they could buy more food and raiment than at a high price—the rationale of demand theory. In this sense they as well as others who have fought over tariff issues have often known the effects of duties. And if this is all that Schultz means to say we can agree with him. If he means, however, that in economics all knowledge in terms of more or less, and probabilities based upon empirical observation is "unscientific" then, of course, most of the body of economic knowledge is unscientific. As Robbins has shown (see above) it is simply a delusion to assume that Schultz's "*laws of demand*" are "scientific" in the same sense as pure theory.

But many persuasive economists have, nevertheless, propounded propositions regarding the actual world which have had a high probability of being true. Their influence upon public policy was not dependent upon an assumed precision made possible by the mathematical process of ignoration, although they often used the more obvious "ceteris paribus." The exigencies of public life require decisions to be made when issues arise. In 1930 more than a thousand economists said that an increased tariff on farm products would be of no substantial aid to the farmer. Here was obviously a judgment about price and quantities—and probably a correct one, but it did not depend on a precise knowledge of the elasticities that are presumed to be indispensable to such judgments. So far as the groups that favored or opposed increases in the tariff were concerned, it was not so important whether a duty increased prices by 86 percent or 100 percent of the duty. Precise knowledge is by all means preferable to approximations approaching truth, but the latter arrived at by stated methods and presented with their limitations, are preferable to no knowledge. These approximations now appear to be all that economists are capable of when dealing with such facts. After a hundred years of protection and other strangulations upon trade against which economists have protested, it would be ironic indeed if we should just now discover that because we had no "concrete laws of supply and demand" we never knew what we were talking about.

OBSERVATIONS ON AGRICULTURAL POLICY[1]

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Submerged as we commonly are in specific tasks, we do well at times to seek to view policy issues in the large. Perhaps discussions such as this may stimulate some of us to make more effective contributions toward wise evolution of our national agricultural policy.

I appear on the program at the urgent request of the President of the Association, after two others whom he had previously invited had declined. In drafting my paper I have tried to follow his suggestions. I shall speak with the freedom of one who for years has had no official connection, and who is not more or less involved in implementing national policies through a state agricultural college. I cannot do full justice to the subject, not only because of limited time for preparation and delivery, but also because I do not pretend to have mastered its intricacies. But I hope to give a provocative discussion, temperately critical and constructive, presenting ample targets for your verbal shots.

I. Introductory Considerations

There is urgent need of finding ways to enlarge and improve our research in agricultural policy,[2] as well as the techniques of bringing research results to bear on the adoption of policies. Three main types of policy research projects, in order of increasing difficulty, may be put thus:

(1) Actual policies and programs call for intensive, skilful examination that goes far beyond narration of events and changing ideas. It should proceed to segregate results attributable to the measures from those due to more or less accidental disturbing factors, and culminate in unbiased appraisal of the whole.

(2) Proposed policies and programs call for searching examination. This should include penetrating study of their objectives, with special reference to real aims as contrasted with mere talking points. There should be what I call a "projective" analysis, including a realistic forecast of how the measures would presumably work in practice, and an appraisal of prospective results with respect both to the objectives and to other consequences, welcome or unwelcome.

In considering policies in vogue currently or in the past, the following questions should be answered:

[1] A paper presented at the Annual Meeting of the Western Farm Economics Association, Reno, Nevada, June 23, 1937.

[2] "The need for research in agricultural policy presents a challenge to the present generation of agricultural economists." Opening sentence of *Research in Agricultural Policy—Scope and Method*, Social Science Research Council Bulletin No. 21, June 1933.

Was the situation designed to be met correctly analyzed?
Were the underlying assumptions of the policy correct?
Did execution of the program prove feasible?
How far were the intended results achieved?
Were the secondary results welcome or tolerable?
Was the net result worth the cost?

Similar questions deserve answer in reference to proposed policies.

I deplore the fact that the policies embodied in the Agricultural Marketing Act—to say nothing of later acts—were not previously subjected to adequate projective analyses of the sort of which I speak; and also that the same can be said, to the best of my knowledge and belief, of the proposed policy of the "ever-normal granary." On the other hand, I am glad to see bits of evidence of fundamental research on policy, here and there, far beyond anything that was being done a decade ago.

(3) On the basis of extensive studies of past experience, the current situation, actual policies, and projective analyses of proposed policies, constructive research should be directed to drafting proposals for policies and broad programs that seem to hold promise of best meeting the needs of the situation while avoiding disadvantageous consequences. In this field it is not to be expected that any one individual will be able at once to arrive at sound and comprehensive conclusions; but substantial progress can be made through the work of numerous individuals and its gradual coordination.

Important among the constructive policies to be drafted are those to be held in reserve for application in the event of serious war or major depression. We have had far too much emergency drafting of emergency policies. It is not too early to make considerable progress, through intensive studies of experiences during the World War and the recent Great Depression, toward the formulation of broad policies and provisionally detailed plans for dealing with corresponding emergencies if and when they should come upon us. Here is one of the most important opportunities of the Bureau of Agricultural Economics and the Agricultural Adjustment Administration, and a challenge to many outside official circles. I say this with full realization of the fact that adoption and alteration of policies rest primarily with Congress and the President.

Certain other differentiations deserve passing attention.

At any one time, I think it fair to say, we have a comprehensive policy toward agriculture, even though it may not be clearly formulated or recognized in any clean-cut fashion. One of the first

tasks in approaching policy problems is to get an orderly grasp of the numerous elements of actual policy, with their manifold incongruities and inconsistencies. The constructive task is not to formulate a policy as if none were already in existence. It is rather to propose modifications and new departures, and to secure a better integration of policies.

Two main groups of policies should be distinguished. First are those designed to bear directly upon agriculture or those engaged in it. Of these I shall shortly touch on numerous examples. Second are those designed primarily for other purposes but with significant influence upon agricultural developments. Signal illustrations of the latter are our immigration and industrial tariff policies; public stimuli to construction of railroads and highways, and to giant flood-control and water-power developments; and the currency, public works, and relief policies of the Franklin Roosevelt administrations. Such indirect or auxiliary elements in our agricultural policy deserve important consideration in any well-rounded treatment, though I have time to say little of them today.

We should also distinguish between active and passive elements of policy. Profoundly important in our agricultural policy, as comparisons with agricultural evolution in Europe and in China would plainly show, have been our constitutional guarantees of freedom of interstate trade throughout this broad land, and effective liberty to move from place to place and from one occupation to another. Almost unrestricted freedom to buy and sell farm land, another long-established passive policy, has been perhaps even more influential than our active national policy under the Homestead Act. The passive policy implied in exempting cooperative farmers' marketing associations from anti-trust legislation should be distinguished from the active policy of promoting farm cooperatives under the Agricultural Marketing Act and others.

In recent years agricultural policy has come to include more and more active elements, of which the production-control policy embodied in the Agricultural Adjustment Act is a striking example. But I submit that we had a policy toward agricultural production before the AAA, when that policy was predominantly one of *laissez faire*. The drift of recent years has been toward rapid expansion of active policies, in this field as well as others; but here, as elsewhere, we should remember that extrapolation of short-time trends is hazardous, and that the reaction that often follows action may spell either retrogression or wholesome progress.

Sharp distinctions should also be drawn between policies designed to meet emergencies—general, regional, or local—and those

designed to deal with persistent problems. The drought-relief purchase of cattle, sheep, and goats in 1934 is in a different policy category from indemnification for cattle slaughtered after condemnation under tests for bovine tuberculosis and Bang's disease, or from the commodity purchases under the Federal Surplus Commodity Corporation. The corn and cotton loans of 1933–34 belong in a different category from current ever-normal granary proposals. Farm credit policies appropriate for conditions in the depth of severe depression are not necessarily appropriate for ordinary times. Huge federal subsidies to farmers, however camouflaged, are one thing in years of extreme agricultural distress and quite another in the general run of years. The grave emergency which the Agricultural Adjustment Act was ostensibly designed to meet has passed. Though the President may have implied as much in his statement of October 25, 1935, he has not yet acted under the provisions of Sec. 13 of the act, to proclaim that "the national economic emergency in relation to agriculture has been ended"; but he is apparently free to define this in such terms that the "emergency" may last indefinitely!

With the qualifications implied in the foregoing observations, I accept J. D. Black's distinction between "policy" and "program," taking the former to mean "a more or less carefully considered course of action followed [or to be followed] consistently for a period of years,"[3] and programs to mean the detailed, changing measures by which attempts are made to give effect to policies. In considering policy or policies, interest centers on objectives and broad lines of action designed to attain these objectives, whereas programs are much more concerned with means to the ends and subsidiary lines of action. Policies should be adopted and altered with deliberation, whereas programs must and should be modified with considerable facility.

I shall try to concentrate on policy rather than programs, but I have to emphasize that actual policies must often be inferred from programs actually applied. No one who examines the AAA programs under the Soil Conservation and Domestic Allotment Act can fail to realize that production control remains part of our current agricultural policy, despite the Hoosac Mills decision invalidating the relevant features of the Agricultural Adjustment Act. On the other hand, in Sec. 32 of the August 1935 amendments to that act, Congress seemed to have deliberately committed the country to export-dumping operations on a huge scale; yet ad-

[3] "The Problem of Determining an Economic Policy for American Agriculture," in E. A. Duddy (ed.), *Conference on Economic Policy for American Agriculture* (Chicago, 1932), pp. 1–5.

ministrative action under this section shows that our actual policy cannot yet be described in such terms.

Certain broad principles of agricultural policy can be set forth on which there can be substantial agreement. I venture to mention five, as follows:

(1) The long-run welfare of the nation as a whole should be the all-embracing objective, the basic criterion by which specific policies should be appraised.

(2) The interests of all those engaged in farming deserve equitable consideration.

(3) Policies should recognize the existence of marked diversities in natural conditions, types of farming, types of farmers, and grades of farming ability.

(4) Policies should be formulated and modified with due regard not merely to recent experience and current conditions but also to persistent economic and social factors and forces.

(5) The various policies should be integrated into a rational whole.

Two of these principles deserve passing comment here, and the fourth I must shortly elaborate.

Much of our agricultural policy *per se*, particularly in recent years, has been directly designed to provide "farm relief" or otherwise to promote the welfare of farmers. Such elements are naturally those most pressed by farm leaders and farm organizations. Fundamentally, however, the soundness of a policy (whether applied or merely proposed) is to be judged by its bearing on the long-run welfare of the nation as a whole. Injuries to certain groups as well as advantages to others must be weighed in studying the balance for or against a policy under consideration. Farmer welfare is not necessarily identical with national welfare. Conflicts of interest between farmers and the nation are fewer and smaller in reality than in appearance, but those which arise should be resolved in favor of the national interest. I shall not argue this basic proposition, for its truth would be acknowledged even by almost all who in practice generally ignore it. Extreme difficulty in applying this touchstone should lead, not to giving it little or no consideration, but to perfecting methods of discriminating analysis that are not yet adequately available.

Moreover, in so far as agricultural policy is designed to aid those engaged in farming, the interests of all groups within the farming industry deserve reasonable consideration. In the past, even the recent past, the interests of the less potent groups have been inadequately safeguarded where they have not been largely ignored.

Such are farm laborers, croppers and share tenants, and small farmers of diversified agriculture as compared with landlords and farm entrepreneurs producing great staple or specialty crops. Few would dispute that here is an obvious defect to be remedied.

II. Conditioning Factors and Forces

Of the conditioning factors and forces I must say something more, at the risk of boring you with familiar facts. New departures in agricultural policy should be framed with due reference to powerful economic and social forces. The play of these forces can be modified by public action of various kinds, sometimes advantageously, sometimes disadvantageously. But they must always be reckoned with; it is exceedingly difficult to run counter to them; and so far as possible they should be utilized constructively. Here it will suffice to specify a few of these forces or their net results that constitute factors conditioning American agricultural policy.

The rate of population growth in the United States has been and is declining, and the age composition of the population is changing to include a smaller proportion of children and a larger proportion of those in the upper age groups. For these trends our restrictive immigration policy bears a major responsibility, and this might be but is not likely soon to be changed. But with existing limitations on immigration, social forces tending to restrict the birth-rate and to reduce the death-rate are highly influential. The same trends in most foreign countries constitute forces that have important bearings on our agricultural outlook and policy. Broadly speaking, these now afford opportunity for technological developments to offset economic tendencies to diminishing returns in world agriculture. In the century before the War, a different balance of these forces enormously stimulated agriculture in overseas exporting countries and the expansion of international trade in agricultural products.

Technological progress in agriculture, industry, transportation, and commerce must be accounted an extremely important force. Its most spectacular expression in our generation is the rise of the automotive industry, with its concomitants and revolutionary consequences. But notable technological developments ramify through the whole economy, in Soviet Russia, Nazi Germany, and Fascist Italy as well as in progressive democratic nations. They exert important influence not only through expansion of agricultural output per person engaged in farming, but also through the multiplication of alternative products and processes, so that agriculture is decreasingly fundamental in the world economy and any one farm product is much less essential than formerly.

Partly in consequence of the foregoing, the tendency of agriculture to decline in relative importance, in a world so progressing, is a powerful force that is not commonly rated at its true value. Though by no means all people, even in the more advanced nations, are well supplied with what may be termed necessaries of life, this is due not to inadequate agricultural resources or output but generally to other things, including effective competition of other goods with essential foodstuffs and fibers produced by farmers. The prospective expansion of effective demand for farm products as a composite group, or for the services of farmers in producing them, is far less than for products and services of non-farmers. In severe depressions the unemployed seek refuge on farms, but not in response to demand for their services there. In the longer view, most of the increase in gainfully occupied workers will normally be absorbed in occupations outside of agriculture. Public policies which interfere with such absorption are to this extent uneconomic.

Farming as an occupation and a way of life continues to have powerful attractions, in spite of its modest financial returns. The technological developments of the past thirty years have diminished many of what were formerly regarded as its outstanding handicaps. The Great Depression brought home to many its almost-forgotten advantages in times of stress, and resulted in a net increase in the farm population in 1930–34 which wiped out the net decline of the preceding twelve years.[4] Moreover, it implies no reflection on the quality of those whom we are prone to regard as typical farmers, to say that millions of people of low ability and training, who are ill-suited to or repelled by the tensions involved in urban life and occupations, and find it hard to earn a living in cities, stay in or fall back into what the census counts as the farm population.

This leads naturally to emphasis upon the mobility of our population, with reference both to location and to occupation, as an impressive social force. Farmers in the United States are a changing group, not a fixed hereditary caste or class firmly planted on the land. There is a striking amount of movement into and out of agriculture, as well as within agriculture itself. Part of this is due to mere restlessness, and much of it doubtless reflects conditions calling for remedy, but a great deal represents wholesome flexibility facilitating progressive readjustment. In any event, agricultural policies must reckon with this mobility as a persisting characteristic of American society.

Parenthetically let me say that because of these forces I consider

[4] Revised estimates given in *The Agricultural Situation*, May 1937, show a net increase of 1,640,000 in 1930–35 (most of it in 1930–32), as compared with 2,610,000 shown by earlier estimates of the Bureau of Agricultural Economics.

contradictory rather than mutually harmonious the objectives of agricultural policy that J. D. Black expressed in 1929—the raising of agricultural incomes and scales of living above the levels of the pre-depression period, and maintaining in agriculture a larger proportion of the population than would otherwise be there.[5] On similar grounds, I consider that the price and income objectives of our current agricultural policy have been set unreasonably, even unattainably, high. Though it would take a good deal of time to elaborate the view, I believe that beyond somewhat narrow limits higher real incomes per farm family are conditioned upon reductions in our commercial farming personnel, as well as increase of size of commercial farms to accomodate improved machine technique; and that subsidies to keep more people in farming will not avail, in the long run, to raise incomes per farmer.

Another force which has long been taken for granted, but has latterly been underrated in government propaganda, is the force of adjustment within agriculture arising from the judgments and actions of individual farmers facing multifarious conditions and prospects. You who are close to the farmer well realize the power of this force, and are not, I am sure, inclined to regard it as antisocial, needing to be displaced by governmental adjustment procedures. I will not sing its praises or expatiate on its undoubted shortcomings which warrant various forms of governmental interposition. I merely emphasize that it should be recognized at its true value, as one which is merely supplemented by official adjustment measures.

Finally, there is the powerful force of nationalism, rampant all over the world. In some of its manifestations it makes for war, or for preparation for defence or for war. In numerous instances it leads to self-sufficiency policies with respect to various farm products, and to radical restraints—direct and indirect—on international trade. In other manifestations the same force results in successful log-rolling in the interests of particular sections regardless of the national interest. This force must be taken into account in considering agricultural policy, even though it be not accepted as beyond the possibility of modification.

III. Policy Objectives

Consideration of agricultural policy requires a clarification of the paramount objectives of policy and subsidiary purposes related thereto, and a sifting out of the sound from the unsound, the attainable from the unattainable.

[5] *Agricultural Reform in the United States* (New York, 1929), Chap. II, especially pp. 60–61.

Put most broadly, I consider the paramount objectives of American agricultural policy should be to protect natural resources against wasteful exploitation and neglect, to facilitate their effective and economical utilization for the longer run, to raise the level of efficiency in the production and marketing of farm products, to promote advances in the standard of living of those engaged in farming, and to increase their security against natural and economic disasters. On further consideration I might add to this list, but most other objectives I view as subsidiary rather than paramount, and of these I can touch on but few.

I regard as inappropriate (in some cases merely obsolete) major objectives the promotion of rapid settlement on the land; maximizing the utilization of agricultural resources, the number of agricultural workers, the output of farm products, or the volume of exports; national self-sufficiency with respect to agricultural products individually or in the aggregate; so-called "parity prices" of farm products and "parity income" for the farm population; and stabilization or control of agricultural production or prices. In the following observations it seems pertinent to comment more at length on certain objectives that I am disposed to condemn.

Early in 1926 the British Ministry of Agriculture and Fisheries stated, in a brief report submitted to Parliament:

> There is a wide measure of agreement that a national agricultural policy should aim at securing the two following objects:
> (1) That the land should yield its highest economic possibilities in the way of food for the nation, and
> (2) That it should furnish a basis of life and a reasonable livelihood to the greatest number of people.[6]

The Ministry itself by no means endorsed these objectives as deserving implementation; they are not the goals of current British policy; and competent observers have criticised them as inappropriate.[7] For the United States these have not been urged as policy objectives, yet others looking in the same direction have been.

I do not believe we need to make a positive objective the production of an ample supply of foodstuffs and fibers, to say nothing of seeking maximum utilization of our agricultural resources. There is no prospect of danger on this score, unless we tamper too radically with the play of economic forces. Despite three or four successive years of adverse weather in 1933–36, the outlook is that, by and large, abundance of farm products will continue to be more of a problem than scarcity, in this country at least.

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[6] *Agricultural Policy* (Cmd. 2581, London, 1926), p. 2.
[7] See *The Agricultural Dilemma: A Report of an Enquiry Organized by Viscount Astor and Mr. B. Seebohm Rowntree* (London, 1935).

Yet Secretary Wallace is reported to have put "safeguarding of the Nation's food supply" first of two "fundamental purposes" of the proposed agricultural adjustment act of 1937; and to have listed first among its principal features "to protect consumers against drought disasters such as in the years 1934 and 1936."[8] These I regard as political talking points, not as justifiable policy objectives. If the nation's food supply needs protection, except against wasteful exploitation and neglect that endanger future productivity, it is not against Nature or farmers but against restrictive and repressive public measures.

In the same category I would put the maintenance of a so-called "balance" between agricultural population and the rest, in any sense susceptible of concrete expression.[9] I do not even regard it a pertinent question to ask: What number or proportion of our people do we want to have living on farms or engaged in farming? The normal relationship is an ever-changing one, and on the whole one of declining proportion of farm population. As already suggested, I disagree with the position expressed by J. D. Black in 1929, that we should strive "to maintain a somewhat larger proportion of our population on the land than would otherwise be the case."[10] In fact, I believe that success in such an objective would be dearly won, and that it could be maintained only at huge expense for subsidies in one form or another, or by abhorrent forms of regimentation. I regard as a condition of long-time advances in standards of living, in city and country alike, that the flow of population from the farms be allowed to continue. Most of the virtues associated with rural life, as contrasted with urban, are potentially attainable by large numbers without involving agriculture as a major occupation.

Here it is pertinent to recall Disraeli's speech in defence of the Corn Laws, in the debate in the House of Commons on February 20, 1846. Touching on those "principles of high policy, on which their system ought to be sustained," he said:

> . . . First, without reference to England, looking at all countries, I say that it is the first duty of the Minister, and the first interest of the State, to maintain a balance between the two great branches of national industry; that is a principle which has been recognised by all great Ministers for the last two hundred years; and the reasons upon which it rests are so obvious, that it can hardly be necessary to mention them. Why we should maintain that balance between the two great branches of national industry, involves political considerations—social considerations, affect-

[8] AP dispatch, May 27, 1937. This bill and accompanying discussion were not available for use in preparing the present paper.

[9] Time does not permit consideration of various other uses and abuses of the elastic word "balance" in connection with policy objectives. The word is easy to use but difficult to use well. Such slogans as "equality for agriculture" and "fair share of the national income" are phrases to conjure with, rather than explicit objectives.

[10] *Op. cit.*, p. 60.

ing the happiness, prosperity, and morality of the people, as well as the stability of the State. But I go further; I say that in England we are bound to do more—I repeat what I have repeated before, that in this country there are special reasons why we should not only maintain the balance between the two branches of our national industry, but why we should give a preponderance . . . to the agricultural branch; and the reason is, because in England we have a territorial Constitution. We have thrown upon the land the revenues of the Church, the administration of justice, and the estate of the poor; and this has been done, not to gratify the pride, or pamper the luxury of the proprietors of the land, but because, in a territorial Constitution, you, and those whom you have succeeded, have found the only security for self-government—the only barrier against that centralising system which has taken root in other countries. . . . [11]

Students of English history in the past 90 years are aware that Disraeli's protest was in vain, that the balance he sought to maintain was not maintained, and yet that the "ignominious catastrophe" he feared did not eventuate. I venture to add that Britain would have found it intolerable and impossible to maintain the balance as Disraeli appeared to conceive it, and that the stability and the progress of the nation were both greatly promoted by the decision to work with and not against the powerful economic forces that were in operation.

So-called "parity prices" for farm products I consider a vicious objective of agricultural policy. It entered into our legislation as a substitute for more unsatisfactory objectives—"tariff equality" with industry and cost-of-production prices for farm products. Officials often defend it when attacked, not as the objective itself, but as a limit beyond which prices should not be raised by governmental measures. Yet farmers have been taught that "parity prices" as legally defined are their just due, and that Congressional recognition of this "right" marked a new epoch in our agricultural policy. I believe it a very serious mistake to propagandize an economic fallacy of this kind, and that the inculcation of this fallacy tends to cumulatively unwise measures. If it were possible to redefine "parity prices" in terms of an average level to which actual prices tend to conform, changing with changes in relative costs and with shifts in demand, the damage would be minimized; but political expediency almost inevitably forces definition of the concept in excessive terms. Attempts to secure and maintain prices called "fair," but in reality uneconomically high, tend in turn to create or intensify maladjustments in production, thus giving rise to pressure for production control even of coercive types. In certain fields, notably feed crops, dairy products, and fruits and vegetables, the national interest calls for policies directed toward lowering costs

[11] From a more extended passage quoted in Bland, Brown, and Tawney, *English Economic History: Select Documents* (London, 1914), pp. 709–711.

rather than raising prices; and except for the short run I believe the farmers' interest lies in this direction also.

So-called "parity income" for farmers seems to me also an ill-chosen if not vicious objective, open to some of the same objections as "parity prices" are. The statistical basis for the concept, as thus far worked, seems to me is shot through with fallacies involved in aggregating and averaging heterogeneous quantities, comparing incommensurables and incomparables, employing "guestimates" extensively, and ignoring what cannot even be "guestimated." I look forward to progress by Dr. Stine and his collaborators in their laborious researches bearing on this subject, but I cannot persuade myself in thinking that the best results attainable will provide us with a serviceable policy yardstick.

Moreover, the economic theory implied seems to me erroneous. We live in a dynamic world in which change is normal. Relative incomes quietly exert pressures affecting the flow of workers into various occupations. Efforts to establish fixed relationships among group incomes per capita will not readily succeed, but in so far as they do they create demands for wholesale regimentation to replace the economic forces that ordinarily make for extensive readjustments.

Among the four stated "fundamental objectives" of the 1937 agricultural conservation program of the AAA is this: "Enable agriculture to provide for the farmer's family a living standard comparable to that enjoyed by the other three-fourths of the country's population."[12] At first glance this seems admirable. Yet it rests on such dubious assumptions as the following: that one can make effective comparisons of standards of living on the average farm and in the average household outside of agriculture; that in their contribution to the national product the farm population is reasonably comparable with the non-farm population; that averages of such heterogeneous groups are appropriate in this connection; and that agriculture alone, unsupplemented by other sources of income, must support the farm population.

With respect to "stabilization" and "security for agriculture" as policy objectives, I have time merely to say that I heartily endorse them in the modest sense of mitigating and moderating instability and insecurity in many forms, but regard them as objectionably overambitious in the senses in which they are commonly employed.

IV. Various Phases of Policy

Certain well-established policies justify continuation with improvements as experience may dictate. Among these are (1) sup-

[12] "Agricultural Conservation: A National Farm Policy," AAA, G-62, Dec. 30, 1936.

port of an extensive system of agricultural education, in high schools, colleges, and universities, and through extension procedures of various kinds, with increasing emphasis on economic and social aspects; (2) promotion of agricultural research, in the United States Department of Agriculture, state agricultural colleges and experiment stations, and elsewhere, also with larger emphasis on economic and social aspects and with some special reference to "social engineering"; and (3) maintaining a flow of current information on acreage, production, demand, prices, and prospects for each. These policies contribute toward several of what I call paramount objectives.

Certain of the newer policies seem to me thoroughly justified in principle, though I cannot discuss them in detail. Among these are the erosion-control policy which, in spite of current exaggerations of the seriousness of the problem, was long overdue and deserves to be effectively prosecuted; other genuine soil- and range-conservation policies, as distinguished from those that masquerade under these heads while serving mainly as an excuse for government payments to farmers or attempted regulation of production; and many other phases of land-use policy which are designed to prevent costly or wasteful use of lands and to facilitate economic readjustments in land use. I see virtue in limited experiments with bringing back sub-marginal lands into the public domain, and in rural resettlement, but consider that experience does not yet warrant us in regarding these as settled major policies.

Production control, on the other hand, seems to me an unwise agricultural policy. Applied under voluntary procedures it is comparatively ineffective but disturbing to normal regional relationships and readjustments. Applied coercively, even with the approval of the farmers directly concerned, it tends to be carried much too far for their own good or that of the nation, as well as to disturb the course of wholesome economic readjustments. Obsession with exaggerated notions of "fair prices," over-optimism regarding both the power and the wisdom of administrative agencies, and public opinion favorable to huge outpourings of federal funds to farmers hard hit by the depression, go far to account for the excessive emphasis on production control in recent years. Even its place in measures to cope with severe depression warrants careful study. All sorts of policies, regardless of the immediate objectives, need to be considered from the standpoint of their prospective influence on agricultural production; and here too I would not condemn limited experiments with production control if it were politically feasible to proceed on this basis.

The so-called "ever-normal granary plan" is officially regarded

as an essential complement of production control. I regret that it has not been effectually formulated by those who propose it, and that it has not been subjected to adequate study in official circles or outside. Most of the arguments for it seem to me ill-founded, many of its supposed advantages illusory, and its costs in various forms gravely underrated. I strongly suspect that unbiased projective analyses of its probable working would reveal that in practice it would not deserve a place in our agricultural policy.

Crop insurance proper, as distinct from forms designed to serve "ever-normal granary" ends, seems to me a promising subject for study and eventual experiment, though I cannot see that a proper basis for the experiment has yet been laid and I am not confident of the outcome. There is much to be said for putting substantial pressure on farmers in areas subject to exceptional hazards, in wheat growing for example, to get them to take out such insurance; on the other hand, in various areas where wheat is a minor crop, farmer participation should not be urged.

"Preserving the home market for the American farmer" has been a persistent policy for many years. It has not been carried to the extremes of necessitating substitution of domestic farm products for tea, coffee, and bananas, which we cannot produce except at prohibitive cost, or of forcing substitution of industrial products for silk, or of ensuring that our farms shall produce all of the sugar, wool, flaxseed, vegetable oils, and rubber that they might if we had embargoes or prohibitive tariffs on these products. Such extreme measures, of course, would not enlarge the home market for farm products to anything like the extent to which imports were curtailed; for consumption would be reduced and industrial substitutes would displace considerable portions of the imports. Nevertheless, the home-market policy has been pressed too far, in my judgment, to be consistent with the national welfare. Moreover, it has induced farmers to accept the same policy with respect to industrial products, which have in turn been made more expensive and have restricted export outlets for our farm products, through reducing the ability of foreign countries to purchase here and helping to induce them to carry protectionist policies to extremes.

"The present policy of this Government relating to agricultural exports," we are semi-officially assured, "has two principal aims. The first is to confine the production of agricultural commodities on an export basis to that quantity which can be sold remuneratively. The second is to expand wherever possible the opportunities for remunerative exportation of agricultural products. While the export opportunities existing at the present time must be accepted

as facts, those of the future are not entirely outside of the control of the Government of this country."[13]

With the policy underlying the reciprocal trade agreements program, as I indicated last year, I am in hearty sympathy—perhaps more in sympathy than the Congress and the Administration are. But I stick on the crucial word "remuneratively."[14] Secretary Wallace, for the time being the leading authority, evidently interprets it to mean that export products must yield the farm producers a satisfactory price, perhaps approximating so-called "parity prices," and that production from which an export surplus is obtained must not entail soil depletion as currently defined. This is crucial because prevention of such "soil depletion" and raising prices to "parity" levels tend to entail restraints on crop acreage, production, and/or marketing, which reduce the competing power of American exports with those of other countries. Our exports of cotton, and in lesser degree those of several other products, have unquestionably been reduced by government measures adopted under the Agricultural Marketing and Adjustment Acts. Domestic price-supporting policies for American farmers may continue to be a powerful force in restricting American exports of farm products as our production recovers and as world economic recovery proceeds. All or most of what can be achieved through reducing trade barriers may be much more than offset, as respects our exports, if the standard of remunerativeness is set too high.

In general, I believe that removal of uneconomic obstacles to export of farm products is a desirable subsidiary goal of policy; but that more specific positive policies, such as various forms of export restriction, promotion, and subsidy, are mainly contrary to the national interest. In recent years a succession of adverse seasons, coupled with depressed conditions and extreme protectionist measures abroad, have reduced our exports of farm products below what will probably prove to be their long-term trend. But it is too much to expect these exports to rise to the level of the years shortly after the War, and we may well lay no great stress on specific export policies.

Surplus-relief purchasing has been and is a "dumping" procedure, primarily designed to support farm prices and enhance farm income. It is less objectionable *per se* than (a) destruction, open or disguised; (b) export dumping, frank or camouflaged; or

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[13] H. J. Wadleigh, "General Considerations relating to Agricultural Exports," in *Agricultural Exports in Relation to Land Policy* (Part II of the Supplementary Report of the Land Planning Committee to the National Resources Board, Washington, 1935), p. 3.

[14] In the section quoted above, no explanation of this word is vouchsafed, though its bearing is brought out in a later section dealing with cotton exports. It does not appear to have reference to export dumping, in which the Administration has small confidence.

(c) government purchase with disposition undetermined. Nevertheless, I regard it as unwise policy to have the decisions dictated primarily by official appraisals of farm commodity positions, rather than by the need for commodities to be used in relief.

To the extent that relief of distress through government aid is essential—for farm, other rural, and urban classes alike—that problem should be attacked as such, with a view to providing the necessary products at minimum cost. Cooperation of the AAA should be sought to insure that advantage is taken of commodity abundance wherever it exists, so that relief funds will go farthest. But this should not involve nation-wide distribution of wheat or flour from the Pacific Northwest, purchase of high-quality rice for general distribution, and extensive interregional shipments of eggs, apples, onions, etc. It should involve direct relief use for food of low-grade prunes, canning peaches, etc., when such supplies are abundant, in regions that can economically be reached.

Our policy on farm tenure has been largely *laissez faire*. It is high time to undertake to distinguish genuinely pathological conditions which adversely affect natural resources, farming efficiency, and farm planes of living; and to correct these conditions by a combination of research, education, restrictions in appropriate forms, and facilitation of wholesome types. The policy should not be determined by fetishes such as farm ownership, family-size farms, or land nationalization. Farm ownership by operators is not good *per se*, though in many circumstances it works best; it often saddles men with risks that they are in no position to carry. Farm tenancy is not bad *per se*, though certain forms tend to be. A broad trend toward increase of tenancy is probably normal, and the major remedy for abnormalities in tenancy lies mainly in raising standards of leasing arrangements, rather than in pouring out public funds for land purchase for sale on long-term credit. Corporation farming, and corporate ownership of farms operated by tenants, should be allowed opportunity to find their normal place in agriculture. What this is we may dimly perceive, but cannot yet be sure of.

Our long-established system of inheritance of farm property needs overhauling. If this were done, it would indirectly improve the land-tenure situation. Where a farmer leaves his farm to two or more children, equal division of the net valuation among those who stay on the farm and those who do not is usually unfairly burdensome on those who stay to operate it, frequently with disastrous consequences. Here more research is needed, education following research can do much good, and state legislation may in time be appropriate.

With respect to migratory farm labor, there is urgent need for legal establishment of minimum standards for sanitary and educational conditions, in the light of modern developments in tourist camps, and for effective protection of the right of such laborers to organize and bargain collectively. There are other particular groups of farm labor, such as those in sugar-beet growing, for which some special regulation may be feasible and desirable. Of the situation in the South, I know too little to speak specifically. With respect to most other farm labor, I believe the need for active public policies is not urgent. As in England in the past century, the best progress in improvement of conditions of farm labor is likely to be forced by reduction in the number of farm laborers through absorption of many into other occupations and through mechanization of agriculture. For most farm laborers who wish to rise to the status of independent farmers, the opportunity should ordinarily come through inheritance or intervening occupations off the farm rather than by a "farm ladder."

Encouragement of the development of cooperation among farmers deserves a place in agricultural policy, but by no means a high or central one such as it had in the Agricultural Marketing Act and as it has in the thinking of some cooperative leaders.[15] Neither theoretical analysis nor actual experience justifies such promotional and subsidizing tactics as the Federal Farm Board pursued under what it considered a congressional mandate. Cooperation so-called is far from being the panacea that its fanatical adherents consider it. In the United States it will probably never have the high place that it holds in Danish agriculture. Milder measures of aid and guidance, such as were used before the Farm Board and have been applied since its abolition, are more conducive to wholesome growth of the cooperative movement. Even yet, discriminations in favor of cooperatives tend to be carried too far.

In closing, I wish to acknowledge the immaturity of my presentation. It is merely the best that I could do in time for this conference. If at various points I have spoken more sharply than the situation or my knowledge of it warrants, it is with deliberate intent to evoke clashes of opinion out of which sound conclusions may emerge. I await your criticisms and supplements in a receptive mood.

[15] Cf. opening sentence of C. C. Teague, in "The Human Equation in Cooperation" (*Cooperative Journal*, July–August 1934, X, 105): "The safest long-time plan for the social and economic welfare of agriculture is the development of cooperation among farmers. . . ."

BASES OF COMPUTING PATRONAGE DIVIDENDS OF COOPERATIVE COTTON GINS

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The index of success of cooperative cotton gins most widely accepted by members is that of the patronage dividend. This applies both to the regularity of the dividend from season to season and to the amount a bale. A direct comparison of patronage dividends paid by a number of associations, however, may be quite misleading. One gin association may charge $.25 a cwt. on seed cotton while another may charge $.40. If the average weight of seed cotton a bale for both gins be 1500 pounds, the gin tolls of the latter will be greater by $2.25 a bale than those of the former. Some associations may follow a conservative policy in that dividends are never paid in excess of net profits while other associations may gauge their dividends by the cash on hand at the end of the season without making provisions for reserves against depreciation, bad accounts and the like. Gins being out of debt, may distribute all profits as cash dividends while gins encumbered with indebtedness may apply all profits in paying off the indebtedness.

A properly conceived and executed patronage dividend policy may be made the means of dramatizing the relations of the member to his cooperative both from the standpoint of his economic interests and of his group responsibilities. A cooperative gin cannot develop a sound dividend policy except on a sound financial policy. A sound dividend policy must be based on fair and equitable treatment of all members. To the extent that officials and employees will go in explaining the details of the patronage dividend, members may be furnished with basic data and information concerning their own business enterprise.

Patronage Dividends Based on Net Profits

The by-laws of many cooperative gins of Texas organized in recent years include a section which defines "Gross Income" and "Net Income." It is then specifically provided that patronage dividends may be paid only out of the net income. To comply

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with this provision of the by-laws, such gin associations must have an audit made of their season's operations before a patronage dividend may be declared. Every cooperative gin would do well to follow explicitly the plan of paying patronage dividends only out of net profits.

Under certain circumstances, cooperatives may gain exemptions from the payment of federal income taxes on their profits. Some of the cooperative gins of Texas have been either ignorant of these provisions or careless in compliance. To be eligible for exemption a cooperative may not pay more than 8 per cent dividends on stock or working capital; in the matter of patronage dividends, the nonmember patron must be treated exactly like the member patron.

Sources of Profits

The main concern of this paper is with the effect of the various methods of computing the patronage dividend upon a member's share of these dividends. As an approach to this problem, attention needs to be directed to the various sources of profits of cooperative gins as well as to a consideration of the contributions members make to those profits.

Cooperative gin associations engage in several distinct types of business operations, each of which may yield profits or losses. To illustrate this point, Table 1 is presented showing the total profits, according to sources, of 73 cooperative gins for the season 1933-34.

TABLE 1. TOTAL PROFITS, ACCORDING TO SOURCES, OF 73 COOPERATIVE GINS IN TEXAS FOR SEASON 1933–34

Source	Profits		
	Amount	Percentage of Total	Average per Bale
Ginning Service	$481,490	60.1	$1.80
Bagging and Ties	99,225	12.4	0.37
Cottonseed	177,417	22.2	0.66
Other Sales	28,509	3.6	0.11
Miscellaneous Income	14,004	1.7	0.05
Total	$800,645	100.0	$2.99

During the season 1933-34, ginning service was by far the most important source of profits, yielding 60.1 per cent of the total with profits on cottonseed second yielding 22.2 per cent of the total.

These 73 cooperatives ginned a total of 267,149 bales during the season of 1933-34. Of this volume, these gins purchased 109,911 bales from members, or 41.1 per cent of the total ginnings.

On cotton buying operations these gins suffered a total loss of $87,696, or 11.0 percent of their operating profits. These losses were equivalent to $.33 a bale of total ginnings. Through cotton buying operations, these gins dissipated one-half of their profits on cottonseed sales.

Distribution of Net Profits

The 73 cooperative gins of Texas for the season 1933-34 realized a total net profit of $648,070, or an average of $2.43 a bale. The disposition made of these net profits is shown in Table 2.

TABLE 2. DISTRIBUTION OF THE NET PROFITS OF 73 COOPERATIVE GINS IN TEXAS FOR SEASON 1933–34

Type of Distribution	Amount	Percentage of Total	Average per Bale
Dividends on Stock, Cash	$ 45,148	7.0	$0.17
Patronage Dividends, Cash	375,011	57.9	1.41
Patronage Dividends, Book Credits	19,414	3.0	0.07
Additions to Surplus	204,864	31.6	0.77
Unknown	3,633	0.5	0.01
Total	$648,070	100.0	$2.43

Of the total net profits 34.6 percent were left in the business, 31.6 percent as additions to surplus and 3.0 percent as patronage dividends in the form of book credits. For every dollar paid as cash dividends, patronage and on stock, $.53 were left in the business. For every dollar paid as cash dividends on stock or working capital, $8.31 were paid in cash patronage dividends.

Bases for Computing Patronage Dividends

In the early years of cooperative gin experience in Texas, the running bale was rather generally used as the basis for computing patronage dividends. The fact that certain members have taken advantage of the running bale method by ginning bales of light lint weight in order to increase the number of units on which to enjoy dividends, has raised the question of the equity of this type of dividend. Furthermore, in most instances, members pay ginning tolls according to the number of cwts. of seed cotton they gin. Even a cursory examination of the ginning records of the various members reveals the fact that the average weight of seed cotton a bale ginned by the different members varies considerably. The average weight of cottonseed a bale sold to the gin by the different members also varies. Such differences of the ginning unit, the bale, also raise the question of the adequacy of the running bale method of computing patronage dividends.

The various cooperative gins of Texas use, in the main, one

of five distinct methods of computing patronage dividends. These methods may be characterized as follows:

1. by the running bale;
2. by the number of pounds of lint cotton ginned;
3. by the number of pounds of seed cotton ginned;
4. by the running bale and cottonseed, or by the pounds of seed cotton and cottonseed (partial departmental);
5. by departments.

The methods of computing patronage dividends used by the various cooperative gins of Texas, during the seasons of 1933-34 and 1935-36, are shown in Table 3.

TABLE 3. COOPERATIVE GINS CLASSIFIED ACCORDING TO METHODS OF COMPUTING PATRONAGE DIVIDENDS, SEASONS 1933-34 AND 1935-36

Type of Dividend	Number of Associations		Percentage of Total	
	1933-34	1935-36	1933-34	1935-36
Running Bale	49	66	60.5	48.2
Pounds of Lint Cotton	16	35	19.8	25.6
Pounds of Seed Cotton	5	11	6.2	8.0
Running Bale, or Pounds of Seed Cotton, and Cottonseed	4	8	4.9	5.8
Departmental	0	11	0.0	8.0
Undetermined or Not Stated	7	6	8.6	4.4
Total	81	137	100.0	100.0

A considerable decline in the relative importance of the running bale, is to be noted, as between the seasons 1933-34 and 1935-36. The lint weight as the basis gained in popularity the latter season as compared with the former. Of particular significance is the fact that while no gin used the departmental method in 1933-34, 11 gins, or 8.0 percent of the total, used this method in 1935-36.

The Running Bale. Under the running bale method of calculating patronage dividends, all profits to be distributed, regardless of the source, are combined in one fund; this total is divided by the total number of bales ginned by all members, or patrons, in order to establish the dividend rate per bale; the distribution to a particular member is ascertained by multiplying this rate by the number of bales he ginned.

The Lint Weight of Cotton. Under this method, all profits to be distributed are thrown into one fund; this total is divided by the total pounds of lint cotton ginned by members, or patrons, in order to determine the dividend rate per pound of lint cotton; the distribution to a particular member is found by multiplying this rate by the number of pounds of lint cotton he ginned.

The Weight of Seed Cotton. Under this method, all profits to be distributed are placed in one fund; this total is divided by

the total cwts. of seed cotton ginned by members, or patrons, in order to ascertain the dividend rate per cwt. of seed cotton; the dividend of a particular member is derived by multiplying this rate by the cwts. of seed cotton he ginned.

The Running Bale, or Weight of Seed Cotton, and Cottonseed. Under this method, profits to be distributed are set up in two funds—the one containing the profits on cottonseed sales and the other containing all other profits. Cottonseed profits are divided by the number of pounds of cottonseed bought from members; the dividends from cottonseed profits accruing to a particular member is found by multiplying this rate by the number of pounds of cottonseed he sold the gin. Other profits are divided either by the total number of bales ginned or by the total cwts. of seed cotton ginned. This manner of computing dividends may be referred to as the partial departmental method.

Patronage Dividends by Departments. Under this method, profits to be distributed are set up in separate funds according to the source of the profits. The member shares in the profits of each department according to his contributions to the profits of those departments. Dividend rates are established by dividing: ginning profits by the total cwts. of seed cotton ginned; cottonseed profits by the total number of pounds of cottonseed bought; and bagging and tie profits by the number of patterns sold. The patronage dividend to a particular member depends upon: the cwts. of seed cotton he ginned; the number of pounds of cottonseed he sold the gin; and the number of patterns he bought.

Contributions of Members to Profits

For the season 1935-36, data were secured from three cooperative gins showing the following totals of each member: bales ginned; cwts. of seed cotton ginned; pounds of lint cotton ginned; and pounds of seed cotton sold the gin. The per bale averages, for each member, of pounds of seed cotton, pounds of lint, and pounds of cottonseed sold the gin were found. In the following analysis, the data on one of these gin associations were used. That the average weights per bale of seed cotton, of lint cotton, and of cottonseed sold the gin may vary considerably among the different members, are indicated by the data in Table 4.

The lowest average weight of seed cotton per bale of the members was 1130 pounds while the highest average was 2867 pounds. The former member paid $4.52 a bale for ginning service (rate $.40 a cwt.) while the latter member paid $11.47. Since the ginning profit per cwt. of seed cotton was 15 cents, the former mem-

TABLE 4. AVERAGE POUNDS PER BALE OF SEED COTTON, LINT COTTON, AND COTTONSEED SOLD TO THE GIN OF 173 MEMBERS OF A GIN ASSOCIATION, IN TEXAS, SEASON 1935–36

Seed Cotton Pounds per Bale	Number of Members	C/S Sold to the Gin Pounds per Bale	Number of Members	Lint Cotton Pounds per Bale	Number of Members
Below 1499	3	0	5	Below 399	2
1500–1599	3	1–100	0	400–424	13
1600–1699	0	101–200	2	425–449	7
1700–1799	12	201–300	2	450–474	15
1800–1899	26	301–400	6	475–499	38
1900–1999	60	401–500	14	500–524	54
2000–2099	37	501–600	14	525–549	26
2100–2199	22	601–700	39	550–574	12
2200–2299	7	701–800	46	575–599	4
2300–2399	1	801–900	36	600–624	1
2400 & Over	2	901 & Over	9	625 & Over	1
Total	173		173		173

ber contributed $1.70 a bale to ginning profits while the latter member contributed $4.30 a bale.

Five members sold no cottonseed of their ginnings to their cooperative gin. Hence, these members made no contributions to cottonseed profits. The highest average weight sold per bale ginned was 940 pounds. Since profits on cottonseed were $.23 a cwt. this member contributed $2.16 per bale to cottonseed profits.

Little or no relation existed between the average weight of seed cotton per bale ginned by members and the average weight of cottonseed sold the gin. It is thus evident that the contributions of members to the various departments varied widely.

Patronage Dividends According to Different Methods

The patronage dividends per bale to each member according to the five methods were determined. A significant measure of benefits enjoyed from membership in a cooperative gin is that of the reduction in net costs of ginning as compared with prices charged for ginning service by private ginners. The net cost of ginning to members of this particular association for the season 1935-36 was $.25 a cwt. of seed cotton and $.70 for the pattern. The patronage dividends to each member according to the different methods were reduced to a percentage of the net cost of ginning.

As means of evaluating the results of the different methods of computing patronage dividends, one of the methods needs to be taken as the standard. It seems logical to assume that the departmental method is the most equitable and the most desirable of the five since under this method each member shares in the profits of the various departments according to his contributions to the profits of those departments. Consequently, the patronage dividends per bale to each member according to the

other methods were reduced to percentages of dividends computed according to the departmental method.

Cotton Losses as Related to Patronage Dividends

Reference has already been made to the losses suffered by cooperative gins during the season 1933-34 on cotton buying operations. To the extent that the cotton is bought from members, these losses may more properly be designated as overpayments. That is, the members benefit to the full extent to which their gin association overpays the market. On the records of the association, however, these overpayments appear as losses. Such losses must, in the long run, be made good out of profits from other sources.

The cooperative gin referred to above, charged cotton losses against members according to the pounds of lint cotton they sold the association. The dividend statement presented to the member showed: the cwts. of seed cotton he ginned; the number of pounds of cottonseed he sold the gin; the number of patterns he purchased; and the number of pounds of lint cotton he sold the gin. His dividend was determined at the rate of $.15 a cwt. on seed cotton ginned; $.23 a cwt. on cottonseed sold the gin; and $.55 a pattern. Against this total, however, he was charged for the overpayment on lint cotton sold at the rate of $.37 per cwt. This was as much as to say that the overpayment on the lint cotton was a part of the patronage dividend already paid the member. It should be clear to the member that he gained nothing by selling his lint cotton to his gin at 37 points above the market.

There are several objections to the practice of a cooperative gin paying over the market for cotton purchased from members. Those associations which are "paying out" reduce the amount of profits which may be applied against the indebtedness. Those associations which distribute profits as cash dividends must reduce these dividends by the amount of the overpayment. More serious still are overpayments during years of net losses on operations.

Members' Understanding of the Departmental Dividend

The running bale dividend gets much support because of its simplicity. It is easy to explain to the member how each patron's share is determined. If the assumption is correct, however, that sound and intelligent support of a cooperative organization on the part of the members depends upon their understanding of the details of operations, this argument is not conclusive. The de-

partmental dividend calls for a system of reporting to members which will acquaint them with the profit and loss status of the various departments. Such information should help to dispel the hazy ideas too many members have as to the origin of the profits distributed through the patronage dividend. Most assuredly the member needs to understand that such dividends as he may receive have their origin because of the fact that: the toll he pays for ginning is more than sufficient to cover the ginning cost; the price he pays for patterns is higher than the net cost of pattern to the gin; the price paid him for cottonseed is sufficiently lower than the selling price to permit the gin to realize a profit on cottonseed sales. With this understanding of sources of profits, how can he escape comprehending the unwisdom of his association paying members a higher price for cotton than the one for which the cotton can be sold?

Summary

The three principles that should guide the patronage dividend policy of a cooperative gin are: 1. Dividends should be paid only out of net profits; 2. the patronage dividend of a member should be determined according to his contributions to the profits of the various departments; 3. cash dividends should not be paid before the gin association is clear of indebtedness.

PRICE INTERRELATIONSHIPS[1]

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The forces behind the longer-time price trend of a specific farm commodity are often combined as one factor that can be associated with the deviations from the usual seasonal trend of prices. The correlation analysis between the "elements in the universe" of a particular commodity has been, and still is, the principal approach to the problem of judging future price changes. This is true whether one is attempting to judge the probable price changes for the month ahead or for the twelfth month ahead. This method requires the use of either a longer-time normal price level or a shorter-time base period.

There is need for more price studies of types other than this so-called factor or relationship type, if price analysts are to make estimates that will secure for producers greater benefits from forecasts of probable price trends. Changing attitudes of buyers and sellers sometimes enter to cause variations from the trend indicated by the factor or relationship type of analysis. The "movement theory"[2] type of analysis permits fuller recognition of this psychological factor. This psychological factor involved in the attitudes of buyers and sellers tends to carry prices on in one direction after they have started in that direction as a result of the effect of other factors. In the "movement theory" type of analysis, the study is made by dividing the price series into advancing or declining price periods. The study of these periods of advancing or declining prices and the determination of whether any current period is a period of advancing or of declining prices helps to judge the effect of the attitudes of buyers and sellers on the shorter trend of prices. It appears that there are definite forces which give certain month-to-month changes in prices in each type of period of changing price levels. This holds true after this upward or downward phase of the price cycle has been started by "certain elements" or fundamental factors. Consequently, it is necessary to judge the effects of the attitudes of buyers and sellers as well as the past relationships of a certain group of elements when one is judging the seasonal changes in prices of farm commodities.

In this paper the results of an attempt to apply the "movement theory" type of analysis to price trends are reported. In the

[1] Contribution No. 96 from the Department of Agricultural Economics, Kansas Agricultural Experiment Station, Manhattan, Kansas.

[2] Working, Holbrook, Cycles in Wheat Prices, Wheat Studies of the Food Research Institute, Vol. VIII, No. 1, November, 1931, page 2.

study, an advancing price period was defined as the period starting at the lowest price paid and continuing so long as succeeding low spots were higher than previous lows and succeeding highs continued to be higher than previous peak prices. A declining price period was defined as the period which starts with a peak price and continues so long as each succeeding peak is lower than the previous peak price and each low spot is lower than the previous low price. The word "cycle" is used in this connection but it does not infer any regularity in the length or amplitude of the swings in prices.

Price trends of eight farm commodities are shown in this study to portray the relation of the seasonal changes in prices to the longer-time periods of advancing or declining price trends. The price for each month in each type of changing prices was studied with reference to the previous month; that is, each January price in each of the uptrend phases was analyzed with reference to the previous December price both from the viewpoint of direction of change and also the percentage price change. To avoid errors because of too short a period of time, the analysis was repeated by using the best price for a two-month period; that is, the best price in January and February in each of the advancing periods was studied in relation to the best price in the previous November and December. Then to eliminate criticisms of still too short a period and to permit the cyclical influence, if present, to overshadow any seasonal price changes, an analysis was made using periods of three months in length. In other words, the best price for the three-month period of January, February, and March in each of the advancing periods was compared with the best price for the previous three months of October, November, and December. Then the best price for February, March, and April was compared with the best price for the months of November, December, and January. Thirty-six periods varying from 30 to 90 days in length were analyzed for each commodity. A summary of the analysis for all commodities was made to indicate how useful this approach may be for each particular commodity. Some commodities such as stocker cattle move from a low to a high price level and back again in such a manner that this type of approach is of little value. Other commodities such as wheat and bran lend themselves readily to this analysis.

The main thesis of the price directional or movement approach is based on the following:

1. That at certain times in the year the price change from the previous period indicates the general direction of the price trend for six to 18 months ahead.

2. That the general trend tends to reflect a difference in the seasonal trend depending upon the direction of the general trend of prices.

3. That at certain seasons of the year the psychology associated with changing price levels tends to be associated more closely with the general price trend than with the fundamental factors or elements that determine the changing price level.

4. That in judging future prices, errors in the estimates are oftentimes caused by swings or movements in prices that are hard to associate with so-called fundamental factors.

5. That from a practical marketing viewpoint turning points in the direction of a price trend are more important than an accurate estimate of an average price for a period of one month, two months, or even a longer period of time. This approach when applied to each 30, 60, and 90-day period tends to give signals of the turn in the general trend in the opposite direction.

Seasonal Changes in Prices Associated with Different Phases of the Price Cycles

There is less relationship between the directional price patterns and seasonal changes in prices, in the case of livestock, than there is with commodities such as wheat, bran, corn, etc. The price analyses of only eight commodities were summarized for this paper but conclusions drawn from studies of other commodities tend to verify the general conclusions made for this study. The price series used were: 1. Monthly tops on fat cattle at Chicago; 2. Monthly tops on fat hogs at Chicago; 3. Monthly tops on fat, aged sheep at Chicago; 4. Monthly top on light stockers at Kansas City; 5. Monthly tops on heavy stockers at Kansas City; 6. Monthly top on alfalfa hay at Kansas City; 7. Monthly top on carload lots of bran at Kansas City; 8. Monthly top on cash contract-grade wheat at Chicago. Table 1 shows the length of the price series used, the number of price advancing and declining periods in the series, and the seasons of the year when there was the most relationship between the longer-time and the shorter-time price changes.

Fat Cattle

In the case of fat cattle there tends to be some relationship between the general direction in price and the seasonal changes when the shorter, 10-day to 60-day periods are considered. When the best price for the longer, 90-day period is used, there is little evidence that prices will work higher during the following 90 days even though the general trend is upward. This is explained, in part, by the way cattle finishers react to an advance in prices. An advance for 30 days creates a holding policy prompted by hopes for further advances. This holding tendency runs its course

TABLE 1. SUMMARY OF ADVANCING AND DECLINING PRICE PATTERNS OF EIGHT COMMODITIES

Commodity	Price series			Number of phases		Seasons that are the most closely associated to cyclical phases[1]
	Started	Ended	Length	Advancing	Declining	
Cattle	January 1878	November 1933	55 yrs. 11 mos.	17	17	March-April-May
Hogs	February 1862	September 1935	73 yrs. 8 mos.	15	14	Jan.-Feb.-Mar.-April
Sheep	February 1879	October 1932	53 yrs. 9 mos.	12	13	Only October
Light Stockers	January 1908	December 1933	26 yrs.	5	5	No time in the year
Heavy Stockers	December 1904	December 1934	30 yrs.	5	6	No time in the year
Alfalfa Hay	July 1915	December 1934	19 yrs. 6 mos.	6	5	Jan.-Feb.-March
Bran	September 1915	December 1934	19 yrs. 4 mos.	6	5	Almost any month but particularly from January to June 1
Wheat	July 1861	December 1932	71 yrs. 6 mos	19	18	All months but particularly the Jan. to Mar. and July to Oct. periods[2]

[1] By "most closely associated" is meant that an up-phase of the cycle was associated with an upward month-to-month price change regardless of the usual seasonal trend in 70 percent of the cases.

[2] In this case, a February price higher than January indicates a continuation of the up-phase. Also, if factor studies indicate higher prices two to six months ahead, then February prices will be higher than January even though seasonally they may be lower.

as soon as the finished cattle begin to become too fleshy to hold any longer. This forced marketing because of the finish starts a price decline which generates further price declines. Finally, relative to the total six-month supply, too many cattle are marketed on the declining price period. This temporary 60- to 90-day dumping period provides a lessened supply 60 to 90 days later which in turn makes possible a continuation of the originally started upward general price trend.

Hogs

In the case of fat hogs, there are about as many seasons in the year that show some of the influence of the directional price changes as there are periods that show a distinct seasonal trend. By distinct seasonal trend is meant those periods that show a definite direction 70 to 90 percent of the time regardless of the direction of the general trend. However, the month-to-month trend in the first four or five months of the calendar year is usually associated with the year-to-year trend. An advance from January to February is usually associated with the advancing phases, and a decline from January to February is usually associated with the declining phases. This rule holds true particularly for the changes from March to April.

Sheep

In the case of fat sheep at Chicago, there is no outstanding relation between the longer-time changes and the seasonal changes. The marketing of this class of livestock tends to be so distinctly seasonal in character that any influence of the longer-time trend on the seasonal changes is overshadowed by the seasonal changes. There were only 22 periods varying in length from 30 to 90 days out of 36 studied that showed either a distinct seasonal or distinct cyclical tendency. Nineteen of these 22 periods showed a distinct seasonal change regardless of the general trend leaving only three of the 36 periods in which one might conclude that there was some directional influence on seasonal price changes.

Stockers

In the case of both light and heavy stockers, it may be said that the price directional approach is of no value in judging future prices. Heavy stockers tend to show some seasonal tendencies but for the most part this class of cattle is influenced to such an extent by the trend of fat cattle prices on one hand and the usually seasonally opposite trend of prices of light stockers on the other, that there is no distinct seasonal trend. The lack of any relationship between the cyclical and the seasonal trend may be caused by the same peculiar situation associated with stocker and feeder cattle.

Primary Crops

In the case of alfalfa, bran, and wheat, there is a marked tendency for the seasonal changes to show a direct relationship with the year-to-year directional changes. Wheat is by far the most outstanding example of this relationship followed closely by bran and then alfalfa.

In the case of alfalfa, 36 periods were analyzed. Of these, nine showed a distinct seasonal trend from one period to the next regardless of the phase of the cycle: Ten showed a distinct cyclical influence; that is, about 70 percent of the price changes were up when the cycle was up and about 70 percent were down when the cycle trend was down: in the other 17 cases, there was no seasonal or cyclical price change tendency shown. In the case of bran, 36 periods were analyzed. In only one of the 36 periods, was there a distinct seasonal trend in both phases of the cycle. In 20 of the 36 periods there was a cyclical relationship with the seasonal price changes. In the other 15 periods, there was no evidence of either seasonal or cyclical trends.

In the case of wheat, there was decidedly a greater relationship

between the direction of the shorter-time and longer-time price changes than there was for any of the other seven commodities. In fact for the 36 periods studied which vary from one to three months in length, there were none of the periods that did not show that at least in 60 percent of the cases the seasonal price advanced in advancing phases and declined in declining phases of the price pattern. In 16 or almost one-half of the 36 periods studied, the cyclical relationship distinctly outshadowed the usual seasonal shifts in prices. One outstanding case follows:

From January of 1878 to November of 1933, there have been 26 July-August periods that occurred in advancing price periods. The best price in 19 of these 26 periods was higher than the best price in the previous May-June period. This means that for this 60-day period of July and August, higher prices were associated with the advancing phase of the price series 73 percent of the time. Likewise, since 1878, there have been 30 July-August periods that fell in declining phases of the price pattern. The best price in 27 of these 30 periods was lower than the best price in the May and June period just previous. This means that in 90 percent of the cases, there was a direct relationship between the longer-time and shorter-time price changes.

Summary and Conclusions

1. In general, the directional price analysis theory can be applied best for judging those commodities which are classed as primary goods or in which speculation plays a part, or in which credit for the purchase and sale of the commodity is an important factor.

2. Wheat, bran, fat cattle, hogs, and alfalfa hay, in the order named, adapt themselves to an analysis by phases of the price pattern while there is little value in the method when applied to stock cattle and sheep.

3. A relationship between the longer and shorter time price changes was considered significant only when both the longer-time and shorter-time price trends were in the same direction in 70 percent of the cases.

4. The timing of price changes is such an evasive problem to answer that one needs to check one's conclusions by considering the indications in the other seasonal periods just before and just after the period being considered, even though in the period under consideration the price trend for the shorter and the longer periods was in the same direction in more than 70 percent of the cases.

A SUGGESTED ADJUSTMENT IN THE FARM TENANCY SYSTEM

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The recent depression has brought into clear perspective many of the fundamental shortcomings of our economic and social organization which have previously been more or less obscure. The shortcomings inherent in and the evils associated with the farm tenancy system were never more obvious, even though numerous students of farm problems had pointed out some of the system's institutional weaknesses prior to 1929. The President's Special Committee on Farm Tenancy gave us, in its Report of last February, the most complete picture of farm tenancy which we have to date. It described the tenancy system, discussed its economic and social consequences, and recommended several programs for action.

The Report pointed out the effects of insecure tenure upon the life and work of many American tenants. A majority of farm tenants in this country hold their farms on yearly leases. Many are economically unable to make essential improvements on their farms, or hesitate to do so because of the danger of losing them upon the refusal of the landlords to renew their short leases. For the same reason they do not find it worth while to plan their farm operations for more than a one-year period. The lack of a long-time interest in their farms results in serious deterioration, negligent farming, and soil erosion. Insecure tenants tend to be irresponsible citizens. Their operations are characterized by a lack of long-time planning and by inadequate improvements. The system of which they are a part is causing an erosion of both the soil and society, the decay of rural communities, and the development of a shifting and shiftless tenantry that is tending to become a permanent class.

To alleviate these conditions, the Committee recommended, among other things, that the several States give consideration to legislation requiring (a) that "the landlord shall compensate the tenant for specified unexhausted improvements which he does not remove at the time of quitting the holding, provided that for certain types of improvements the prior consent of the landlord be obtained"; (b) that "the tenant shall compensate the landlord for any deterioration or damage due to factors over which the tenant has control, and the landlord shall be empowered to prevent continuance of serious wastage"; and (c) that "after the first year payment shall be made for inconvenience or loss sustained by the other party by reason of termination of the lease without due cause."

Similar adjustments in the tenancy system have been recommended by many students of farm tenancy. They are being used successfully by some leading landlords and tenants in this country, and have long been recognized as an indispensable part of the tenancy system in several foreign countries. Both at home and abroad, where similar compensation provisions are included in the leasing agreements or are made compulsory by statutes, the relationships between landlords and tenants are amicable, profitable, and conservative. These adjustments, therefore, are not new and untried. They have been used successfully under a wide variety of conditions and over a long period of years. It is important, however, to determine just what would be included in these compensation provisions, and how they would function if made a fundamental part of the tenancy system in this country.

From a practical point of view, compensation should be divided into three categories, and may be defined as follows: (a) *compensation for improvements*, which refers to the payment made by the landlord or by the incoming tenant to the outgoing tenant for the unexhausted value of the improvements which the outgoing tenant made during his occupancy of the farm, or for which he compensated the previous tenant with the consent of the landlord; (b) *compensation for deterioration*, which refers to the payment made by the tenant to the landlord for any damage, deterioration, or dilapidation which the tenant may have committed or permitted during his occupancy of the farm; and (c) *compensation for disturbance*, which refers to the payment either to the landlord or to the tenant, as the case may be, for any damage or loss which he may experience owing to an undue termination of the lease or an unreasonable refusal to renew the lease by the other party.

Although leading landlords and tenants have been using compensation for a number of years, there has not developed in this country a definite group of contractual relationships or statutory regulations which may be designated as falling within these definitions. In the early days, and in some instances at present, the tenant did not pay either cash or share rent, but in lieu thereof he contracted to make certain improvements which became the property of the landlord at the end of the lease. It is also quite common for tenants to agree to make repairs and certain improvements to the property without pay. Furthermore, in some contracts the landlord agrees to pay the tenant currently for the labor expended on certain improvements which the landlord specifies. These practices do not represent compensation for unexhausted improvements as used by leading landlords in this country and as practiced

in foreign countries, and they do not pertain at all to the concepts of compensation for deterioration or for disturbance.

Since an early English statute (the Statute of Marlbridge, 1267), tenants have been required in that country to compensate their landlords for waste to the property. The requirement was included in the early leases used by the colonists in this country, and has continued as a part of our tenancy system. In actual practice, however, it is seldom that damages for waste are collected in this country. The court process is too costly and cumbersome, and landlords generally do not find it economically feasible to bring suit. The waste also must be significant, and it cannot be confined to year to year deterioration or dilapidation if damages are collectible. The right of the landlord to claim damages for waste, as practiced in this country, does not represent compensation for deterioration.

A few landlords, holding farms in anticipation of an early sale, agree to compensate their tenants for growing crops and other work if they are requested to leave the farm before the end of the crop year. This practice cannot be considered compensation for disturbance.

The basic philosophy underlying compensation is mutuality. Mutual advantage is given and mutual responsibility is required. The main objective of compensation is to place the tenant-operator in a position as similar to that of an owner-operator as is reasonably possible, with reference to the organization and management of the farm, the improvements of the farm home, and participation in the activities of the community.

In the light of constitutional limitations, it is impracticable for the Federal Government to adopt legislation requiring compensation, thereby making it apply to all tenant-operated farms in the several states. A state legislature, however, has the power to pass any legislation not prohibited by a provision in either the State or Federal Constitution. It appears that the enactment of laws requiring compensation, as outlined, is not in conflict with the due process clause, and is a proper exercise of the police power. Furthermore, landlords and tenants in this country generally have been permitted by law to make any type of agreement convenient to them. This is particularly true of the financial arrangements which they make with reference to the leasing of the farm. Consequently, they may agree to any type of compensation provision which is adaptable to their particular situation. Therefore, the following comments will refer only to provisions which may be required by laws enacted by the legislatures of the several states, or to provisions which may be used in the leasing agreements entered into by individual landlords and tenants.

Compensation for Improvements

In general, improvements which the tenant may make, accrue to the benefit of the landlord. Some states have adjusted this old common law rule, however, by permitting the tenant to remove any removable improvement effected by him. This adjustment solves the problem only partially since many improvements are not physically and economically removable. Therefore, the tenant should be accorded the additional privilege of leaving certain improvements on the farm and of receiving compensation for them when the lease is terminated.

The improvements for which compensation should be payable may be divided into three categories, as follows: (a) improvements to which the consent of the landlord is required; (b) improvements to which a notice to landlord is required; and (c) improvements to which neither the consent of nor a notice to the landlord is required.

The improvements in the first category may well include those of a more permanent nature, such as the erecting or altering of buildings, the constructing of permanent fences and major works of irrigation and drainage, and the establishing of permanent pasture. The landlord should not be required to compensate the tenant for these improvements, unless the tenant, prior to their construction, had received the consent of the landlord.

The improvements in the second category may well include those of a semi-permanent nature, such as the establishing of major erosion control devices, the making of roads and bridges, and the constructing of wells, reservoirs, or other works for the supplying of water. To effect any improvement included under this division, the tenant should be required to send a notice to the landlord of his intention. When the landlord receives the notice he should be accorded the privilege of effecting the improvement, or if he does not desire to do so, the tenant should be permitted to make the improvement and receive compensation therefor at the termination of the lease. If the landlord at his own expense makes any of the improvements in the second division, after receiving notice from the tenant, he should be permitted to charge a higher rental than that agreed upon in the original contract. The increase in the rental should be a sum which would represent a nominal interest and normal depreciation charge on the improvement. If the tenant makes the improvement, the rental should not be increased owing to the enhanced value of the farm.

The improvements in the third category may well include those of a less permanent nature, such as the establishing of small fruits and perennial garden plants not in excess of those necessary for home use, the preparing of the land for next year's crop, and the

applying of lime, fertilizers, or manure which will increase the fertility of the land. The tenant should be given the privilege of making any of the improvements included in this division without consulting the landlord.

The amount of compensation due the outgoing tenant may be determined by a mutual agreement between the landlord and the tenant, by a prearranged schedule contained in the lease, or by arbitration. Regardless of which method is used, the amount of compensation should be based upon the value of the improvement to *an* incoming tenant. When this basis of valuation is adopted, only one question is involved—how much has the improvement increased the value of the farm to an incoming tenant? Controversial questions as to the cost of the improvement, its reproduction cost, and the amount of depreciation will be largely eliminated. Furthermore, no question will arise as to what value to assign to the improvement in event *the* incoming operator does not intend to use the farm in the same manner as the outgoing tenant used it. The term "*an* incoming tenant" requires that the valuation be based upon the assumption that the farm will be used as it would normally be used in the area.

The valuation of certain unexhausted improvements may be somewhat difficult at first, but will become relatively easy when better valuation techniques have been developed, when research in soil fertility has progressed to the place where the residual effect of different fertilizers and manures has been determined, and when depreciation schedules on buildings and fences have been more accurately established.

Compensation for Deterioration

Many tenant-operated farms in the United States deteriorate year after year, even though the general rule of common law and many state statutes require that the tenant return the rented property to the landlord in as good condition as it was when he received it, and notwithstanding the fact that many leases contain requirements that the tenant farm the property in a good and proper manner. The ineffectiveness of these provisions in preventing waste is owing largely to the absence of a reciprocal provision requiring compensation for improvements, and to the expensive and slow court process. Therefore, it appears necessary that the requirements against waste and deterioration be strengthened in order to conserve the land and the buildings thereon. The deterioration for which the tenant should compensate the landlord should include all waste, injury, damage, dilapidation, or impair-

ment of the property, not involving ordinary wear and tear or changes due to natural forces.

For the sake of convenience, deterioration may be divided into two categories, as follows: (a) deterioration to the land and things pertaining directly thereto, arising from negligent farming, overcropping, and removal of trees or minerals; and (b) deterioration to buildings and fixtures, because of failure to maintain the property, removal of buildings, and negligent use. The determination of the amount of compensation for deterioration should be based upon the same principle as the valuation of compensation for improvements. Thus, the tenant would be required to compensate the landlord for any decrease in the value of the property to an incoming tenant. As in the case of compensation for improvements, the amount may be determined by mutual agreement, by a specified schedule, or by arbitration. The payment may be made when the deterioration occurs, if it be of such a nature that the tenant cannot repair the injury, or if he fails to do so within a reasonable time after having it called to his attention; otherwise, it may be offset by any compensation due the tenant for improvements or for disturbance.

Compensation for Disturbance

Owing to the fact that many tenants find it necessary to make or to renew their leasing agreements each year, because of the laxity of regulation with reference to improvements, and owing to the constant deterioration of the farms, the rural tenantry is constantly shifting from farm to farm year after year. In fact, in 1935 almost 50 percent of the tenant farmers in the United States had been operating their farms for less than two years. There appears to be two alternatives if a continuation of this process is to be prevented —either the leases must be written for a much longer period, or the tenant or the landlord, as the case may be, must be reimbursed for the loss or damage experienced when the lease is unduly terminated or when its renewal is unreasonably refused. It appears that long-term leases would not be acceptable to landlords and tenants, owing to the fact that many landlords are not inclined toward long-term leases, and many tenants are not desirous of being tied down immediately to particular landlords. Therefore, agricultural leases may well be drawn for a minimum period of five years, terminable at the end of any year by either party upon the payment for the inconvenience or loss sustained by the other party resulting directly from the termination of the lease. Provided, however, that termination may be made at the end of any lease year by either

party giving six months' notice without payment for inconvenience or loss under specified conditions similar to the following: the tenant is not cultivating the farm according to the rules of good husbandry; either the tenant or the landlord is legally bankrupt; the landlord or the tenant has caused a breach in the lease which is not remedied after notice; or the landlord desires the farm for the purpose of farming it himself.

The amount of compensation for disturbance may be the actual loss or damage experienced, a specified sum, or a stated percentage of the annual rental. The procedure to be used should be agreed upon between the two parties or should be provided by statute.

Compensation in Actual Operation

The definitions of compensation for improvements, deterioration, and disturbance, and the general plan outlined with reference to these three types of compensation have been based upon the experience of leading landlords and tenants in this country and upon the longer and more varied experience of landlords and tenants in several foreign countries, particularly in England, Wales, and Scotland. The general plan may be adjusted by landlords and tenants in the light of their particular leasing situations, and by each state through adapting the compensation provisions which may be included in its statutes to the conditions on its tenant-operated farms.

Compensation could probably be more effectively applied to cash leases than to share leases. Under the cash lease the tenant usually maintains more control over the operation of the farm and receives the entire benefit of the improvements during the time he operates it. With a system of compensation, cash tenants would generally make more improvements and would probably be influenced more effectively toward preventing deterioration than would share tenants. It is clear, however, that compensation is thoroughly adapted to the share-renting system, except to that category of share tenants in the South who are popularly known as "sharecroppers." Owing to their low economic status, lack of control over the operation of the farms, and their unfamiliarity with management and long-time improvement problems, they would be affected less by compensation for improvements and for deterioration than other tenants. They would, however, like all other classes of tenants, be benefited by compensation for disturbance.

The experiences of a few leading landlords and tenants in this country and of all landlords and tenants in England, Wales, and Scotland, where compensation is required by statute, indicate that

it will prevent deterioration, increase stability and security, and make for better farming, better living, and better rural communities. Compensation for improvements was made compulsory by statute in these countries in 1883. Compensation for deterioration was made effective at the same time. These adjustments in the leasing system proved very much worth while both to landlords and tenants. They were expanded in their scope and readjusted from time to time as experience indicated. Compensation for disturbance was made a part of landlord and tenant statute in 1906. These three provisions for compensation now form the backbone of the English tenancy system. The average period of occupancy by tenants in England is over four times that of tenants in this country, and the landlord's property is fully maintained and in many cases actually improved.

Thus, when adequate compensation provisions are effectively utilized in landlord and tenant relations in this country, it logically can be expected that the landlord, the tenant, the land, and the community will be mutually protected. The landlord will be directly protected against any loss or damage to his property, owing to the negligence of the tenant, and against undue evacuation by him. He will be indirectly protected owing to the superior system of farming developed by the tenant, because of the feeling of equity, stability, and security. The tenant will be protected against any loss arising through the necessity of occupying the property without adequate improvements, and against leaving on the farm, without just compensation, any improvements which he may have made. The good tenant will also be guaranteed a relatively high degree of stability of occupancy and security of tenure, and he will not find it necessary to move from farm to farm year after year through no fault of his own. The land will be protected to a certain degree against a shiftless tenant, through effectively holding tenants responsible for deterioration, and against exploitative landlords, through making it possible for the tenant to improve the land by developing a system of farming which will maintain soil fertility. The community will be protected, through the presence of more stable and secure farm families who are interested in establishing relatively permanent homes, and in identifying themselves with the economic, social, religious, and political institutions of the community.

These advantages, however, cannot be gained merely by enacting a statute requiring compensation. There will arise some difficulties in determining the amount of compensation. To facilitate the settlement at the termination of the lease, a system of arbitra-

tion which the parties could use, should be established by statute. Even though a compulsory use of arbitration is probably unconstitutional, it could be provided that if the two parties agree to arbitration at the time of making the lease, this agreement would be irrevocable. A detailed description of the condition of the farm at the beginning of the lease and a complete record regarding improvements made by the tenant would facilitate settlement at the termination of the lease. Furthermore, if notices, requests, and consents were made in writing, many misunderstandings would be obviated.

Future of Compensation

As in the case of similar adjustments in other aspects of the economic organization of agricultural production, the use of compensation will be confined to a very small number of landlords and tenants if no positive action is taken, and if each landlord and tenant has to perform his own research and do his own experimentation. It will be possible, however, to facilitate considerably the use of compensation through the research and educational endeavors of the workers in the agricultural colleges. The various agricultural colleges are in a position to do the research which is necessary to determine the residual values of lime, fertilizers, and manure, and to establish definite criteria to be used in determining depreciation due to negligent farming. The type of educational program which could be fostered by the agricultural colleges is similar to their usual extension program.

The professional farm managers have an excellent opportunity to develop ideal leases through expanding the use of compensation. Also, the agricultural teachers in rural high schools may find farm leases a worth while subject for discussion by their regular students, and also interesting and instructive to their adult and evening classes.

Before the use of compensation becomes widespread, it may be necessary for the various state legislatures to enact laws providing that all landlord and tenant contracts contain specific compensation provisions outlined by statute. The Federal Government, as has been previously indicated, cannot regulate landlord and tenant relations. It may, however, provide a limited amount of assistance in the development of an educational program, in the formation of appropriate research projects, in the preparation of improved lease forms, and in supplying technical information to state legislatures with reference to adequate landlord and tenant statutes.

A STUDY OF NATIONAL FARM LOAN ASSOCIATIONS IN THE FOURTH FEDERAL LAND BANK DISTRICT*

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National farm loan associations are the locally owned and locally managed farmers' cooperative credit organizations through which federal land bank loans are made to farmers. There are over 5,000 associations serving the more than 600,000 federal land bank borrowers in the entire United States. There are 489 associations in the Fourth Federal Land Bank District, comprising the four states of Ohio, Indiana, Kentucky and Tennessee. These associations have endorsed and become liable for the payment of all loans made by the federal land bank to their members. The ultimate security back of such endorsement is the capital stock of the associations, subscribed by borrowers in an amount equal to five percent of their loans.

It was the hope of the framers of the Federal Land Bank system that it would be unnecessary for national farm loan associations to impair their capital stock to meet maturing losses on loans endorsed by them. That their hope was vain is indicated by the financial history of the associations since the late 1920's. On June 30, 1936, only 41 percent of the 489 associations in the Fourth District were without capital stock impairment, and 18 percent had their capital stock over half impaired.

Seventy-five associations distributed throughout the Fourth District were surveyed in 1935 and 1936, and certain data were obtained for all associations in the Fourth District in order to ascertain and analyze those factors of organization, management, and control which have been most conducive to association success. The degree of capital stock impairment of the associations as of December 31, 1935, was used as the basic measure of association success. That is, the stock impairment for any association as of that date was accepted as a measure of the cumulative effect of the various influences which have affected that association during its years of operation. For purposes of comparison, associations studied were divided into two general classes: those with less than 50 percent stock impairment which are permitted to close new loans and are classed as "active," and those with more than 50 percent stock impairment which are not permitted to close new loans and are classed as "inactive."

* This paper is abstracted from a more complete study by the same title made while the author was an employee of the Louisville Land Bank, which was submitted to Purdue University as a thesis in partial fulfillment of the requirements of the Ph.D. degree.

One of the most important factors to be considered in analyzing variations in capital stock impairment of national farm loan associations is the geographical distribution of associations in the several impairment classifications in relation to prevailing types of farming. However, when the location of the inactive associations is plotted on a types-of-farming map of the Fourth District, certain trouble areas stand out, especially in Indiana and Kentucky, wherein were situated 50 of the 67 inactive associations on December 31, 1935. The conclusions drawn from the following brief analysis of the distribution of inactive Indiana associations will apply, in the main, to the Kentucky association also.

Indiana is divided into several fairly well defined types-of-farming areas. Three areas have relatively few inactive associations, while an equal number of areas have a considerably larger than average proportion of inactive associations. Data pertaining to current real estate values and the decline of values from the high mark of 1920 in each of these areas are given in the table. There appears to be little relation between the actual value of farm real estate and the proportion of inactive associations. Nor do variations in the relative decline of values from the high year of 1920 to 1930 and 1935 explain such concentration of inactive associations. The average value of all Indiana farm real estate declined 43 percent from 1920 to 1930 and 60 percent to 1935. Declines in real estate values in two type areas with few inactive associations exceeded the average state decline in both 1930 and 1935, while values in the third such area declined considerably less than the state average. Likewise, decline of values in the three type areas with many inactive associations followed no consistent pattern.

A third possible explanation of the concentration of inactive associations in a particular type-of-farming area is the major source or sources of farm income in that area over a period of years. The fact that 44 percent of the associations in the western cash grain area of Indiana are inactive is no doubt a partial reflection of the very wide range in grain prices during the last 19 years. About 56 percent of the farm land in that area is normally in corn and oats, a large proportion of which is sold for cash. Relatively few hogs and few dairy cattle are kept. Immediately east and southeast of the cash grain area lies the central grain and livestock area, depending chiefly on general farming and livestock for farm income, with only nine percent of its associations inactive. Average value of farm real estate in both areas was comparable from 1920 to 1935, and relative decline of value from the 1920 figure varied in the two areas only three percent in 1930 and two percent in 1935.

PERCENTAGE DECLINE IN LAND VALUES, 1920 TO 1935, AND PERCENTAGE OF NATIONAL FARM LOAN ASSOCIATIONS INACTIVE, DECEMBER 31, 1935, FOR SIX INDIANA TYPE-OF-FARMING AREAS

Type-of-Farming Area	Real estate value per acre—1930 census	Decline in land values 1920 to 1935 in percent	Total number of associations	Percent inactive Dec. 31, 1935
State	$71.90	60	140	19
Northeast Dairy and General Farming	74.82	63	16	12
Central Grain and Livestock	93.37	63	33	9
Central Southern Hill Farming	34.80	44	22	14
Western Cash Grain	79.43	65	9	44
Southeastern Wheat, Corn, Hogs	85.05	59	9	33
Southeastern General and Livestock	41.54	55	13	46
Twenty-four Counties with Inactive Associations	64.78	61	56*	48

* Includes 16 associations chartered since 1933.

The index of United States grain prices fell from an average of 227 (1910–14 = 100) during 1917–20 to an average of 67 during 1930–33; a decline during that period of 180 points. The index of United States meat animal prices, on the other hand, fell from an average of 190 during 1917–20 to 87 during 1930–33, a decline during that period of only 103 points. Moreover, although the index of grain prices was somewhat above the index of meat animal prices from 1921 to 1925, the ratio was noticeably reversed from 1926 to 1929, when farm foreclosures were increasing in frequency.

The chief reason for the breakdown of mortgage loans probably lies not so much in the high level of farm prices when the loan was closed, as in the extent to which farm prices fell in subsequent years. Falling farm prices and land values after 1920 would not have taken such a toll of foreclosures had farm costs declined at a comparable rate. After farm organization becomes adjusted to a given price level, certain fixed costs continue at or near that level long after the index of farm income has declined. If the disparity between farm income and expense becomes too great in any locality, there is nothing left above current living and production costs to pay mortgage interest and installments, and wholesale foreclosures inevitably result.

There is no significant relationship between the average date of

charter of national farm loan associations and their capital stock impairment, excepting those associations chartered since 1933. The first associations were chartered to accept loans in the Fourth District in June, 1917. There is little evidence to indicate that associations chartered before 1920 have suffered more severe losses than those chartered in the few years immediately following 1920. The larger associations, as a class, have been less likely to suffer capital stock impairment than the smaller ones. This condition likely reflects the ability of the larger associations to command and pay for the services of more competent management during the times when loans needed close supervision to prevent their breaking down.

It was clearly in the minds of the framers of the original Farm Loan Act that the national farm loan associations, through their secretary-treasurers as hired employees, should be responsible to collect, receipt for, and transmit to the federal land bank payments of interest, amortization installments, or principal arising out of loans made through the associations. This procedure was followed for a short time after the organization of the farm loan system, but the work of servicing and collecting loans was gradually absorbed by the bank until the associations had practically no direct responsibility in connection therewith at the time of the organization of the Farm Credit Administration in 1933. The program of association rehabilitation pursued since that date has restored the important duty of loan servicing to the associations. Starting with the February, 1937, collections, all interest and principal maturities in the Fourth District were required to pass through association offices. Even prior to this requirement, 44 percent of 54 secretary-treasurers interviewed urged all borrowers to make payment through their office, and were insistent that delinquent borrowers make payment in their office. It was estimated that approximately one-fourth of current payments and three-fifths of delinquent payments were being made in association offices during the winter of 1935–36. An increasing number of secretary-treasurers were willfully assuming the additional trouble of handling current collections through their offices in order to get that additional semi-annual contact with their borrowers, in the hope they might be able to prevent delinquencies before they occur.

A growing tendency among Fourth District associations is the use of directors in the collection program. All but five of 54 secretary-treasurers interviewed review delinquency cases periodically with their boards of directors. Well over half of all delinquent accounts were estimated to be reviewed regularly by the directors. It is not surprising, therefore, that delinquent directors had a

striking effect on loan delinquency in the associations they served. One hundred twenty-five associations with one or more delinquent directors on September 30, 1936, had average loan delinquency of 11.6 percent, while those associations in which all directors' loans were current had an average delinquency of only 6.7 percent.

In their efforts to maintain sound cooperative credit institutions, national farm loan associations must have the cooperation and active support of their member-borrowers. Especially is this true since such important responsibilities have been restored to the associations. However, a cross-section of borrower attitude gained from interviews with 200 borrowers indicates the need for a continuous and far reaching educational program designed to acquaint the borrower with his individual responsibility to select and maintain good management at the head of his association. Less than half of the borrowers interviewed realized their association had endorsed their note to the land bank. Only 52 percent knew they owned stock in their national farm loan association, and the majority of the remainder thought they were stockholders in the federal land bank. Fifty-five percent knew the source of land bank loan funds, most of the remainder inclining to the belief they had borrowed "government money." Only one-third regarded themselves as members of a local credit cooperative, and three-fourths had no recognition whatever of their responsibility to help secure good management for their association.

In the light of this damaging evidence, it is encouraging to note that secretary-treasurers discern a growing tendency among borrowers to recognize that their primary responsibility is to the association instead of to the bank. As a general rule, a borrower who is well posted on one phase of association management and operation can speak intelligently about all phases, and one who harbors one important misconcept is likely to know little about the association.

Members of inactive associations were better informed about their relation and responsibility to the association than were members of active associations. It is very improbable that the better informed membership in the inactive associations developed until those associations had encountered financial difficulty and were well on the road to an inactive classification. Even though growing capital impairment was conducive to a better informed membership, the transition came so late in the life of the association that many members soon resigned themselves to the possibility of losing their entire stock equity in the association and showed even less interest in the affairs of the association than previously. A well informed membership is essential to the continued welfare of any

cooperative venture, but it must be developed before financial havoc has destroyed the morale of the membership if it is to be effective in keeping the capital stock equity of the association free from impairment.

The steady decline of the proportion of stockholders attending annual meetings from 1922 until 1930 is mute evidence of the progressive decay of stockholder interest and stockholder participation in association affairs during that period. Forty-five percent of all stockholders attended the annual meetings in 1922, as compared with 19 percent in 1930. Attendance rose slightly in 1931 when dividends ceased to be paid, and then fell off to 15 percent in 1935. Slightly over one-fourth of all members attended in 1936, when a concerted effort was made to secure large attendance. There is an inverse relationship between capital stock impairment and the amount of interest stockholders have taken in the affairs of their associations, as shown by their attendance at annual meetings. During the years 1922–35, associations which had over 100 percent impairment in 1935 had average attendance of 22 percent, compared with 26 percent for associations with no impairment.

During the decade or more prior to the current program of national farm loan association rehabilitation, a great number of associations became one man organizations with the board of directors controlled by and entirely subservient to the secretary-treasurer. In many cases stockholders were elected to the board of directors simply because no one else would bother with it. The election of directors at annual meetings was frequently a "necessary chore" executed with great dispatch. The most frequent method of election was the renomination of the entire slate of incumbent directors and their election by acclamation. Even as late as 1936 this method was reported as still being used by 33 of 52 secretary-treasurers interviewed. This method of election is subject to the triple objection that inefficient and incapable board members are apt to be retained year after year, it lends itself to unethical manipulation by the secretary-treasurer, and it tends to impress the stockholders that the election is being railroaded, whether or not it is in fact. Many secretary-treasurers would prefer to have more than five nominees for the board, with each stockholder participating actively in the election except for the difficulty of counting ballots under the present system of voting shares up to twenty. An amendment to the Act giving each member one vote would simplify procedure at annual elections, and would result in more members taking an active part in the management of their association.

Slightly over four-fifths of the directors in 60 associations studied

were actual farmers. In 25 of the 60 associations all directors were farmers, and all but four of the associations had at least three farmer directors. Thus it is obvious that nominal control of most associations rests primarily with the farmer element of the membership. The average age of directors was 52 years. The majority of directors had been stockholders of their associations for a considerable length of time. Presidents had been borrowers for an average of fourteen years, while the remaining directors had been stockholders for an average of eleven years. Over half of all directors had a high school or college education. The educational status of directors tended to increase with the lowered capital impairment of the associations they served. While it would be incorrect to assume that the educational status of present directors is responsible for capital impairment, yet it is probably true that those associations which now have better educated directors have always stressed the importance of electing well qualified men to the board. In the main, an association which now has competent, active and well educated directors has had directors of comparable calibre for a number of years.

The tenure of presidents and other directors has been shorter in inactive associations than in active associations. The frequency of personnel changes tended to increase after an association became inactive. The business transacted in those associations fell to a minimum, they were inadequately financed, many members resigned themselves to the fact that their stock equity was entirely lost, attendance at annual meetings fell off, and frequently the election of directors and officers became a matter of finding anyone who would take it. There is no evidence that more frequent personnel changes in inactive associations were the result of action by an aroused membership. Neither is there any evidence that associations which are now inactive had always had a more frequent turnover of management. At the present time the expectancy of tenure for association presidents appears to be about five years, and for association directors between six and seven years. The expectancy of tenure for secretary-treasurers is between five and six years.

In 1918 it was estimated that 43 percent of all secretary-treasurers in the United States were farmers, 30 percent local business men, and nine percent lawyers. In February, 1936, 19 percent of secretary-treasurers in the Fourth District were farmers, 19 percent attorneys, and 12 percent insurance agents. Less than eight percent devoted their full time to the work. There is no evidence that men of one vocation have been more successful as secretary-treas-

urers than men of other vocations. So much depends upon the personal qualifications of the individual that two men of the same vocation may make either a satisfactory or an unsatisfactory secretary-treasurer. Even though it is desirable from many standpoints to have a full time secretary-treasurer, yet even where there are enough loans to support a full time man, the "best man for the job" in that community may conceivably be someone who has another line of activity, such as insurance or law.

The average age of 52 secretary-treasurers interviewed was 50 years. There was little apparent relationship between the age of secretary-treasurers and the capital stock impairment of their associations. Over half of the secretary-treasurers had attended college one year or more, and all but six out of 52 had at least a high school education. It is improbable that the education of secretary-treasurers has materially influenced the capital stock impairment pattern of the district. There is more relation between education and vocation of secretary-treasurers than between education and capital stock impairment. Four-fifths of the secretary-treasurers interviewed were reared on a farm, and seven-tenths of them had actively operated a farm sometime in their lives. There is no significant relationship between the farm background of secretary-treasurers and capital impairment of the associations they serve.

The Louisville Land Bank declared a total of 13 regular and one special dividends from its organization to December 31, 1930, the date of its last dividend. Total dividends declared were $3,608,111. The average total amount of $10,361 was declared to each of 166 selected associations in the district. One-tenth of the total amount of dividends declared was withheld by the bank to offset delinquencies and deficiencies which were liabilities of the associations. With only a very few exceptions, national farm loan associations paid to their stockholders the major portion of dividends received from the land bank. Over three-fourths of all dividends actually received by associations were passed on to their members. After the last dividend had been declared in 1930, the total legal reserve of 166 selected associations amounted to 11.17 percent of all dividends actually received, only slightly above the minimum 10 percent of earnings required by law to be set aside in legal reserve. Association officers should not be blamed unduly for their having transferred to reserve accounts such a small proportion of dividends received, for in so doing they were merely following recommendations of the Farm Loan Board and of officers of the federal land bank.

It was contemplated in the original farm loan act that two of

the principal sources of income to the associations should be initial loan closing fees charged new borrowers and dividends paid by the land bank. These sources of revenue were fairly adequate for practically all associations as long as loans were being closed in sufficient volume to compensate the secretary-treasurer and as long as dividends were being paid by the bank. Moreover, delinquencies and foreclosures were far less serious during the 1920's than in recent years, with the result that less effort was needed in the field for loan servicing. With the dwindling of loan closings and the cessation of dividend payments in 1930, association finances were in a bad condition. This condition was reversed with the tremendous increase in loan closings following the organization of the Farm Credit Administration in 1933, and for two years association income skyrocketed. However, most of this income went to secretary-treasurers as compensation. In 1935 the Louisville bank instituted a plan of association loan servicing compensation which it is felt places the financing of current association operations on a sound and permanent basis. A fixed monthly sum per loan outstanding is paid to the associations, 80 percent of which goes to the secretary-treasurer for his services. Under this plan the compensation of the average secretary-treasurer will be about $1,650 annually, a fair income in most of the small towns where associations are domiciled. In the smaller associations where the compensation is less, the secretary usually has a supplementary vocation which is a source of additional income.

The adequate financing of current operations is only half of the story of association finance, if indeed it is half the story. The associations' endorsement of loans makes them liable for all notes taken from their shareholders by the bank. With such an enormous potential liability, running into millions of dollars in the larger associations, it is imperative that associations have some substantial and certain source of income from which they may liquidate losses that must inevitably result under such an arrangement. After the cessation of dividend payments, practically the only means an association had of paying a loss on one of its endorsed loans was out of its capital structure. It was the original thought that the legal reserve of an association would be sufficient to meet such losses, but history has demonstrated the futility of this hope. As the losses matured, they were borne by the bank, but were charged against the associations under a so-called indemnity agreement, and became an impairment of the capital stock of the associations.

A study of the semi-annual stock impairment classifications from June, 1933, to June, 1936, reveals a trend toward greater impair-

ment. Of the 434 associations chartered before 1933, 87 percent were in active status on June 30, 1933, compared with 82 percent three years later. At the end of this period 24 fewer associations were active than at its beginning. During the same three-year interval the number of associations entirely without capital impairment declined from 237 to 176. It is this tendency of associations to go into lower classification that constitutes the most severe threat to association responsibility and autonomy. Under the present plan even the soundest associations in the district face the potentiality of loss on endorsed mortgages, with no certain or substantial source of income from which such loss may be liquidated. Moreover, a casual inspection of existing contingent liabilities borne by associations lends little hope indeed that the downward trend of association classification will be arrested in the immediate future.

On September 25, 1936, a total of $3,122,776 was charged to associations under the indemnity agreements, and constituted a lien against the capital stock of the associations. The figure had increased $239,185 in less than seven months. Even though these charges tended to be concentrated against a relatively few associations, it is important to know that roughly two associations out of three had deficits in their indemnity accounts. On the same date the legal reserve of all associations totaled $312,134, while an additional $67,759 of legal reserve had been applied on the indemnity account. Invested funds and surplus cash held by associations was $170,739. Hence the total of legal reserve and surplus funds was under half a million dollars, as compared with over three million dollars due under the indemnity agreements. When association reserves are viewed as a ratio of the capital stock they are designed to protect, their utter inadequacy is obvious. The total legal reserve on September 25, 1936, was 2.66 percent of outstanding capital stock. Add to this the invested general funds and surplus cash, and the total was only 4.11 percent of capital stock.

Two main proposals have been advanced to correct the condition of high association liabilities and low reserves. One is for the bank to share equally with the associations all losses incurred through the disposition of foreclosed lands. The other is for the bank to declare an outright dividend to the associations or substantially to increase the current allowance payable to associations under the servicing compensation resolution. The first proposal would alleviate the financial plight of associations only temporarily, and would not reach the root of the trouble. Associations would continue to face potential loss with no substantial income of their

own above that necessary for current operations. Perhaps the simplest solution would be the resumption of annual dividend payments by the bank. This would preserve the associations' liability on endorsed mortgages and would treat all associations equitably insofar as their participation in the assets and earning of the bank is involved. However, practical difficulties stand in the way of paying an outright dividend, chief among which is the contention that it would be unsound for one land bank to pay dividends when it is jointly liable with the eleven other banks for the obligations of certain banks whose assets are currently in distressed condition. The most obvious solution at the present time, then, appears to be an increase in the current allowance to associations under the servicing compensation resolution, such increase to be applied specifically either to existing deficits of the association or to a special reserve fund of the association. This plan will preserve the financial autonomy of the associations, and will be an important step in the general program of national farm loan association rehabilitation.

Summary

Through this entire analysis of the factors affecting national farm loan association operation, one factor has consistently stood above all others in importance. That factor is good management. Many variables touching association operation appear not to have had any material effect upon association success. Among these are the value of farm real estate in the area where loans were closed, variations in the relative decline of farm real estate values from the high year of 1920 to 1930 and 1935, and average age of associations. Factors which appear to have exerted some influence on association success include variation in farm income accruing to farmers in a given area over a period of years, size of association, proportion of members attending annual stockholders' meetings, and the educational status of directors. Those factors which appear to have the most influence on association success are most generally related directly to the management of a particular association. They are factors which reflect the desire and the ability of the incumbent management to solve effectively the problems that may arise in the association.

The essential problem of association operation, then, resolves itself into one of providing and keeping well qualified management in charge of the associations. This is a problem that has been faced by cooperatives of all kinds for many years. Experience has demonstrated that those cooperative associations which have a well informed and active membership are most likely to be competently

managed over a period of years. In the final analysis, therefore, the problem of keeping good management largely becomes one of maintaining an intelligently informed and actively interested membership.

The program of decentralization of responsibility and rehabilitation of associations which has been under way since 1934 has made significant progress. In most instances the Farm Credit Administration and the bank appear to have been sincere in their efforts to decentralize responsibility among the associations; in other instances there is evidence that a spirit of paternalism toward the associations overshadowed the desire for real decentralization. If the program is to be successful, caution must be exercised to prevent undue paternalism on the part of the bank. The local boards must be given as much responsibility as possible for making decisions affecting the associations, although the bank should retain the veto privilege on important matters. The veto privilege must be used only when absolutely necessary, and even then with much discretion, or it will defeat the entire program of rebuilding association responsibility.

The federal land bank system is organically a system of dual jurisdiction and authority. There are certain duties and decisions which do, or should fall principally to the bank; there are certain others which are, or should be the responsibility of the associations; the remainder are the responsibility of either the bank or the association, or both, depending upon particular circumstances. Association directors should be familiarized with the nature and extent of the field over which their jurisdiction extends, and they should be called upon to exercise their own initiative in making all decisions within their jurisdiction. When association directors have been assured their decisions will be respected by the bank, they will take a more active and intelligent interest in the affairs of their association. And when directors take their responsibilities more seriously, the bank will find it expedient to place additional responsibilities on local directors.

FARM LABOR*

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Introduction.—Problems centering in worker-employer relations, in wages, working hours, housing, and other working conditions to insure to western agriculture an adequate supply of competent workers have been increasing in importance during the past three or four years. So much so that of all problems affecting agriculture, that of farm labor is today among those foremost in the discussions and thinking designed to solve the present ills of agriculture.

Problem Not a New One.—The problem of farm labor is by no means a new one, although its characteristics have changed from time to time. The agricultural development of the western states dates from 1769, in the southwest, when the San Diego Mission was established and, in the northwest, from 1810 when the Winship brothers made their first plantings on the Columbia River bottoms. Problems centering around agricultural labor began to appear soon after these early beginnings, particularly in California, and have been present in greater or lesser degree nearly ever since.

The first problems in California started with the compulsory employment of Indians by the mission fathers. Sixty-five years later farmers were discussing the problem of securing more adequate supplies of labor and went so far as to offer free transportation to California, wages of a sailor for two years, and five years of free rations as inducements for laborers. Again, sixteen years later, when the discovery of gold lured hundreds of farm workers to the Mother Lode, similar and even more urgent problems arose. As early as 1874, cotton pickers could not be found easily for the 2,000 acres then grown. In later years growers were much concerned with the problem of obtaining adequate workers to handle the extended acreages of tree and vine fruits, sugar beets, hops, and truck crops, which had by then been developed. In the course of these various periods California turned successively to Chinese, Japanese, East Indian, Mexican, and Filipino labor. Still more recently the migrant white laborer from the southern Great Plains area has become a factor in the situation.

During the early years of the World War, there was agitation for the government of the United States to foster the importation of 25,000 Chinese laborers to aid in growing and harvesting the crops of California. During the early 1920's, there was considerable

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discussion of the questions of applying quota limitation to Mexican agricultural laborers. As late as the past two decades, importations of field workers from the Hawaiian and Philippine islands and from Puerto Rico were financed by growers' organizations. Thus the problem of obtaining an adequate supply of competent help and the social problems associated with efforts to meet this need have been virtually ever-present since the beginning of agricultural development, particularly in California. In the other western states, the problem apparently has been much less acute than in California, since the development of agriculture there has been in the direction of the family-type farms of the Middle West, using, for the most part, native American help.

Thus, though the problems centering around the agricultural labor situation have varied in nature and intensity from time to time, they have appeared repeatedly throughout the history of this western region. As a rule, the progress in bringing in new lands and new enterprises has been in advance of the available labor supply. During the recent period of depression, however, there appears to have been some reversal of this situation.

Different States Present Differences in Problems—Both as to Nature and Degree.—The brief historical sketch gave more prominence to California than to Oregon and Washington, because labor problems here have, in the past, been more numerous and more acute. Doubtless this condition is true today. It is not surprising when one realizes that California is producing commercially 213 field, fruit, and truck crops, conducting 21 livestock enterprises (for example, lamb, wool, mohair, breeding stock, beef, dairy products, pork, fur rabbits, show stock, and others); 11 poultry enterprises (for example, baby chicks, eggs, meat fowls, breeding stock, etc.); and a score of miscellaneous products (for example, honey, queen bees, package bees, fox furs, trout, mushrooms, nursery stock, bulbs, cut flowers, etc.). So much diversity gives us a bigger dose of problems and hence an intensified interest.

It is, moreover, natural for any speaker to marshal his thinking in terms of personal experiences and contacts. I shall try to be conservative but remember that thirty-one years of continuous residence must leave their mark.

Farm Labor Classified by Tenure of Employment.—For purposes of eventual discussion, let's divide farm labor into its several component parts. For purposes of identification the following classification is used:

1. Unpaid labor performed by the operator and members of his immediate family.

2. Labor performed by workers hired on a permanent or practically permanent basis—the so-called regular help.

3. Labor performed by workers employed for relatively short periods to perform specific tasks—workers who, from the standpoint of individual employers, are temporary help. This help may reside in the community or may consist of the migratory, transient, or roving type of worker, of which Filipinos, Mexicans, "fruit tramps," and "blanketmen," are cases in point.

Farm Labor Classified by Needs of Agriculture.—Another classification which supplies a useful basis for farm-labor discussions is a grouping of farm labor according to the needs of agriculture. Different tasks obviously call for different qualifications. A suggested "break-down" is:

1. Experienced skilled labor. This group contains workers able and willing to work without detailed direction at tasks calling for the exercise of judgment. Their experience must be such that they are familiar with the demands and technique of milking, handling teams, running implements and machinery, riding range, herding sheep, pruning orchard trees, thinning and picking fruits, irrigating, or similar tasks.

2. Experienced common labor. This group contains workers needed for such tasks as thinning and topping onions; thinning, pulling, and topping sugar beets; cutting asparagus; hoeing, pitching hay, picking cotton, and similar jobs which call for following instructions without much need of exercising judgment.

3. Unskilled inexperienced labor. This group contains workers hired for the more simple operations for which neither skill, experience, nor judgment is needed, such as picking up fruits for drying, picking up nuts, forking manure, shocking hay, but who possess the required strength to insure an adequate day's work.

This classification, though a rough approximation, emphasizes varying needs. In point of numbers, the greatest constant need of American agriculture is for experienced skilled workers; the next greatest need is for common skilled workers; the least, and hence more inconsequential, need is for unskilled, inexperienced workers.

Employers' Conception of Satisfactory Labor.—Most employers of farm labor desire workers who combine certain qualifications or are amenable to prevailing conditions in line with the following:

1. Experienced in the work to be done; familiar with operations to be performed and equipment to be used.
2. Reliable, conscientious, and energetic.
3. Able to perform a full day of work.

4. Able to comprehend and willing to obey orders cheerfully and faithfully.

5. Possessing whatever may be required of agility, alertness, carefulness, cleanliness (of person and habits), dexterity, quickness of eye or fingers, speediness, steadiness, strength, initiative, and judgment.

6. Willing to work for the wages an employer is able or willing to pay.

7. Willingness to accept board and lodging such as the employer can or does furnish.

8. Willing to do a variety of tasks when occasion demands or to help out in emergencies.

9. Willing to conform to the length and schedule of the working day.

10. Willingness of seasonal workers to remain on the job until the task is completed.

11. Capable of living harmoniously one with another.

Employees' Conception of Satisfactory Work.—Analysis of satisfactory work from the workers' point of view is as enlightening as the employers' viewpoint concerning satisfactory labor. Workers reflect the same divergence of viewpoint as do employers. Some hold as most important phases which others do not stress. Thus the Nordic tends to be interested in working conditions and the nature of the job, as well as wages, while the Filipinos and Japanese think more of wages than of the kind of work or the working conditions. Within each group individual differences likewise arise. The following list is, however, fairly inclusive of the various aspects which workers stress.

1. The highest possible wage. Most workers desire all the wages that they can get—not alone, however, for what the money will buy; but because high wages are evidence of selling one's services to the best advantage.

2. Decent living conditions.

3. Satisfactory board.

4. Prompt payment.

5. Healthful working and living conditions.

6. Pleasant working environment. This item covers the prevalence or absence of dust, fog, heat, cold, rains, snows, mosquitoes, etc. It also includes access to places of amusement and recreation on Sundays and days when work is slack.

7. Length of working day.

8. Steady employment.

9. Current wage.

10. Wage scales that recognize responsibility, length of service, importance of a particular job.

11. Character and amount of supervision. The typical American, a good deal of an individualist, knowing his job and proud of it, doesn't worry much about the supervision provided it is given kindly and understandingly; other groups, of which the Italian, Mexican, and Japanese are typical, consider the "boss man" a dominant factor.

12. Relation of work to worker's training, experience, and liking. So far as within his economic power every worker chooses work that he likes, for which he is trained, and which he believes he can do. He may insist, therefore, on doing the tasks for which he was specifically hired. If employed to ride range, he may resent being put to irrigating; if hired as a teamster, he may refuse to milk or do chores. Many workers are not willing to change, and once the job for which they were hired is done, they are liable to quit rather than to turn to something distasteful to them.

13. In mixed crews, characteristics of other workers. When men of other nationalities or other interests constitute the labor crew, some workers decide to continue or quit on the basis of how they react toward fellow workmen.

14. Privileges. A rather vague factor, involving such items as permission to use a saddle horse or farm car for personal affairs, right to smoke on the job, privilege of gambling when off duty, time off, etc.

15. Impartiality of treatment (meaning absence of favoritism).

16. Chance to learn, to advance. This item is principally important to young men and newcomers desirous of acquainting themselves with farming generally or with local conditions, or merely to master some particular operation or machine which promises to be more profitable or more interesting.

17. Opportunity to procure supplies (such as tobacco, newspapers, and stamps).

18. Proximity to doctors, churches, towns, fellow countrymen, friends, and relatives.

Outstanding Problems Today Center in Seasonal Labor.—Ignoring questions pertinent to unpaid family labor and to canning or packing-shed workers, problems affecting farm labor today largely center in finding an adequate supply of seasonal labor competent to do the many tasks for which temporary help is required.

California's Need for Seasonal Labor.—A two-year intensive inquiry into the need for seasonal labor required in producing and harvesting California crops indicates an annual need of nearly

22½ *million man-days.* This need, however, is by no means constant. In fact, the yearly requirements "break down" into three major periods. From November through April, the need is relatively low, namely, a monthly average of about 1,200,000 man-days. During April, May, and June the need rises to a monthly average of 2,200,000 man-days. The maximum or "peak" need occurs in the months of August, September, and October, coincident with the harvesting of extensive acreages of cotton, grapes, hops, sugar beets, and various other truck, field, and fruit crops. This maximum need amounts to a monthly average of 2,900,000 man-days.

Stated as numbers of individuals, the minimum need for *efficient* workers is:

Period	Average number of workers (*round numbers*)
November–April	59,000
May–July	100,000
August–October	134,000

If the available labor is somewhat inefficient, the numbers must be increased proportionately. These data indicate that for every 100 seasonal workers required in the relatively low or base period, 172 workers are needed in the intermediate period, and 227 workers during the three months of "peak" need.

Seasonal Labor Creates Problems.—A vast horde of temporary workers, numbering tens of thousands of individuals, creates problems of no small magnitude. Much of the work piles up at certain seasons, so that year-round employment is impossible for the great majority of these workers.

On the basis of the evidence, one might conclude that California agriculture offers year-round employment for 48,000 workers, eleven months for 2,000 more, ten months for another 6,000, etc. But the facts are that even as little as 48,000 workers cannot be given year-round employment because of the varying nature of the required tasks beyond the capacity of individual workers and the widely separate areas offering employment. Thus an ever-present problem is found in the lack of opportunity for any large proportion to earn enough (at current wages and in the face of irregular employment) to supply them with the bare necessities of life.

The very nature of the work creates a roving, transient group. Establishment of permanent residence is obviously attended with difficulty, and for most workers is impossible.

Short-time periods of employment cannot justify the kind of housing and conveniences for use of season workers which is economically feasible when labor is employed for all or a substantial portion of the year.

Farmers *as a rule* set wage rates at a level with ability to pay. There are exceptions, particularly in connection with the large corporation-controlled holdings, but in general farmers do pay as much as their returns justify.

In view of the difficulties of finding work, earning enough to maintain themselves and families, and frequently inadequate housing conditions, it is not surprising that workers take steps to better their conditions. In California, during the year 1936, twelve strikes (including "lock-outs" or "boycotts" as different groups designated them) occurred in varying degrees of intensity; enough to indicate either something radically wrong or a strengthening of workers to a position of demanding more than conditions justify.

Recently (February 27 and 28) a couple of hundred representatives of farm workers met in San Francisco under the auspices of the State Federation of Labor and took definite steps looking to a state-wide unionization of all farm workers. This move has given heart to many workers, and heart failure to many employers. Its ultimate outcome is, however, debatable, and no one can say whether it is to succeed or fail.

Variations in Crop Need for Seasonal Labor.—Variations in need for seasonal labor arise because of a wide difference in (a) enterprises, (b) tasks and yields (affecting harvest labor), (c) time of performance, (d) nature of the farm business, (e) amount of available work done by operators, unpaid family help, and regularly employed help, and (f) size of the farm business.

Some crops require a relatively small employment of seasonal labor; others require many workers. The tabulation on page 920 is illustrative.

The need of seasonal labor for specific crops is obvious. In general the least need arises in connection with field crops other than sugar beets, cotton, and hops. Both fruit and truck crops require extensive use of seasonal labor.

The amount of hiring of seasonal laborers, however, varies between counties, because of the interplay of the factors listed above. Thus need for seasonal labor in connection with small grains varied from 25 to 438 man-days per 1,000 acres in seven counties. Likewise alfalfa needs of five counties varied from 330 to 1,256 man-days. This suggests a need for caution in applying state averages to specific localities.

TABLE 1

Crop	County	Required man-days of seasonal labor annually (per 1,000 acres)
		Relatively low requirements
Small grains	Contra Costa	25
Alfalfa	Riverside	330
Grain hay	Riverside	412
Grain sorghums	Tulare	448
		Relatively high requirements
Sugar beets	Monterey	5,800
Oranges	Orange	6,175
Lettuce	Monterey	8,300
Pears	Sonoma	8,992
Cotton	Fresno	9,650
Tomatoes	Orange	12,458
Apples	Sonoma	13,080
Prunes	Tulare	13,086
Cantaloupes	Tulare	18,930
Peaches	Tehama	26,249
Peas	Tulare	29,558
Strawberries	Orange	48,237
Hops	Butte	51,000

Seeking Solutions to Problems.—Probably other states do not have these problems to face—at least not in so acute a form. States without serious problems do not need to worry about remedies. Unfortunately California is not in their class. So we have been probing into possible solutions.

At this stage we must content ourselves with hopes rather than fulfillments in that many of the needed solutions are still ahead of us. For one thing we need more basic data. Information, for example, is lacking concerning numbers of available workers. It is my opinion that every state needs such data. Their collection requires devising some program to determine the numbers, types, and localities of itinerant workers and to periodically report numbers and qualifications with a view to matching workers with jobs. Until more information is available concerning these workers, it will be difficult if not impossible to avoid excessive spreading of work and consequent tragically low incomes on the one hand, and on the other hand, inadequate numbers of workers in given areas at given times.

A need is likewise apparent for a more adequate survey and

appraisal of housing facilities, to determine adequacy and to locate areas and farms inadequately equipped.

The kinds of housing suited to the needs, responsibilities, and customs of the various types and classes of laborers call for more study than they have thus far been given. Types of facility needed and desired vary greatly from place to place, according to time of use, length of stay of the occupants, etc. An adequate appraisal of needs can be made only through better knowledge than is now available concerning patterns of customary movement and some assumptions about the places in which such laborers and their families will live during slack seasons.

Several other matters justify consideration. I cannot do better, in this connection, than to quote from a report prepared by Dr. M. R. Benedict, in cooperation with Dr. L. A. Wood of the University of Oregon, and Dr. W. L. Hopkins, of the University of Washington, who, acting as a subcommittee on research in the field of agricultural labor, laid stress upon the following (in addition to points I have already raised and several others I shall not here include):

"5. *Labor Relations in Agriculture.*—There is need for more adequate study of this whole problem along several lines such as the following:

a. Causes of friction between employees and employers.
b. Possible methods for orderly consideration of controversies when these arise.
c. The place of the labor contractor in the relationship of employer to employee.
d. The employment exchanges and how to get them used.
e. Labor organizations, their forms, objectives and methods of functioning.
f. Employer organizations, their forms, objectives and methods of functioning
g. The problem of the relation of law-enforcement agencies to the situation when labor difficulties arise.
h. Possibilities and limitations of collective bargaining in agriculture. Institutional devices through which collective bargaining might be carried out.
i. A study of the labor laws affecting agricultural labor.
j. A study of the attitude relations between employers and employees. Possibility of developing more tolerance in conference arrangements.

"6. *Studies of Incomes of Agricultural Laborers.*—More definite and representative information concerning this will aid materially

in understanding the problem. These studies should show the situation as a whole with a breakdown by labor groups and types of job, income from sources other than agriculture, and amounts of time worked. These studies should, as far as possible, indicate the extent to which extremely low incomes are the result of numbers of laborers in excess of numbers needed, with consequent excessive spreading of work through competition for jobs.

"7. *Studies of Social Conditions among Migratory and Other Agricultural Laborers.*—

a. Educational opportunities and attainments.
b. Health conditions.
c. Savings and opportunities for saving.
   Possibility of credit unions or some other arrangement whereby funds can be better cared for.
d. Attitudes with respect to
   (1) stabilized residence
   (2) use of slack-season time.

. . . . . .

16. *Analysis of the Functions of State, Federal, and Other Governmental Agencies with Respect to Activities Pertaining to Agricultural Labor.*—Both the legislation governing and the kinds of tasks assigned to these agencies have been undergoing rapid change during recent years. There is much need on the part of all lay groups for a clearer picture of agencies concerned, lines of activity extent of coordination, etc."

The basic thought of all these proposals is to analyze the possibilities of stabilizing labor conditions along lines of more continuous work, better living conditions, and a more stable labor supply, under as good wage conditions as can be provided with prevailing economic conditions.

So much for proposed studies. As to actual accomplishments, your attention can be directed to a few noteworthy developments.

Wages have tended to be higher this year than last, particularly at harvest time. Some view this as evidence of a shortage on the theory that if there are more men than jobs, the result is a lessening of the wages that must be paid, and conversely, interpret an increase in wage scales as evidence of a shortage of workers. But I maintain the increase is traceable to better returns to farmers and their willingness to share some of the benefits with the workers. The rate for cotton picking in California, for instance, was set at $1.00 per 100 pounds of seed cotton this year with pickers' reactions distinctly favorable and satisfied. Note that the rate paid in 1935 and 1934 was 90 cents. The price paid for picking raisin grapes

has also been on a higher level. Although the same schedule was adopted for 1936 as that prevailing in 1935, growers actually paid rates from one-fourth to one-third higher than the scale as tentatively agreed to. Help hired on an hourly basis received in general about 5 cents more per hour than was paid in 1935, or an increase of generally from 15 to 20 percent. Rates being paid to sugar-beet toppers and loaders, under schedules that provide for per-ton rates according to the yield of beets, were up approximately 10 percent over those prevailing in 1935.

The use of arbitration has been more in evidence as a means of settling labor disputes. I wish time permitted a detailed analysis. From personal experience and contacts with arbitration, I am emphatically in favor of a more extended use of arbitration. There are limitations, of course, but the advantages, in my opinion, far outweigh them, provided the personnel of the board is right and it functions in a prompt and proper manner. I regret that lack of time prevents a full analysis of arbitration—its possibilities, limitations, and *modus operandi*. I may add, as a final thought, however, that when the trouble centers on insistence by workers for union preference—another term for the modified closed shop—then the problem is of a nature that does not lend itself to settlement by arbitration. Greatest usefulness follows the use of arbitration in connection with fixing of minimum wage rates, working hours, daily schedules, protection of workers, and other matters which deal primarily with working conditions not involving a question of the open or closed "shop."

The building of community camps under federal supervision and with federal funds has resulted in providing two for California. These are proving to be entirely worth while and have justified themselves in the face of considerable early farmer opposition.

Nature May Help.—Our evidence is tending to show that western agriculture is in need of a supply of labor for certain tasks and certain seasons far greater than can be profitably employed by agriculture throughout the entire year. In the past, workers have shown up when needed without the employer's giving much concern as to how workers fared between times of farm work. Up to recent years, industries other than agriculture provided employment during off-farm seasons. Many ranchers, too, provided a limited number of free meals to itinerants. Moreover, the need for seasonal labor was formerly not so great as it is today because more acreage was then devoted to crops of relatively low seasonal labor requirements, while today the acreage in crops of high labor requirements is substantial.

Under present circumstances and as long as agriculture continues as it is at present organized, there is need for more workers at certain times of the year than agriculture can alone support or for whom agriculture can furnish employment throughout the entire year. Moreover, the capacity of industries other than agriculture, within the boundaries of this state, to supply employment for workers at times when these workers are not required in connection with farm work is apparently not sufficiently great to insure enough work to adequately care for workers' needs.

This is a condition which must be squarely faced. It raises a number of questions. Must agriculture within its own resources provide for the well-being of the vast army of workers needed at peak times to insure a supply of adequate farm help when this help is needed? Can it so provide? Must reorganizing of agriculture progress to a point that employment and workers' needs are more in balance than is the case at present? Should the state be called upon—and this means the taxpayers—to provide ways by which workers can earn a livelihood when not employed on farms? Is a proper function of the State to take steps to do what practically amounts to a subsidy for one of its industries—agriculture—notwithstanding that agriculture is of basic importance? Frankly, I do not know the answers. Many of them must by their very nature savor of personal opinion and opinions are certain to differ. But it is a certainty that if some way cannot be found to maintain the workers required to provide the necessary labor for agriculture as it is at present organized, then reorganization of agriculture is bound to take place.

Recent evidence shows that in many areas where a given crop has been grown for a number of years that yields are decreasing and that few measures are being taken by producers to maintain the crop-producing power of the land, to say nothing of trying to increase this power. There are exceptions, enough to point the way to better farming. It is beyond the scope of my talk this morning to delve very deeply into this aspect of our agriculture. Suffice it to say—because it bears upon the matter of farm labor—that far more extensive use of cover crops and rotations must be practiced if the depleting effects of the present farming procedures are to be offset. There are definite dangers inherent in tenants' moving from farm to farm as fast as they deplete one farm, only to carry on the same exhausting program on another farm. This is one problem of continuing tenancy. It applies especially to farming lands to cotton, sugar beets, and truck crops. Exhausting practices can also be noted in owner-operated farms devoted to these

crops, and to many of the orchards and vineyards as well. Let these present practices continue, and nature will step in to force a change because of lessened yields, lessened yields traceable to a reduction in organic matter, possibly in soluble plant foods, increasing numbers and extent of weed growths, and multiplying pests—insect, fungus, and bacterial. And such a change, particularly if it involves crop rotations, will tend to accomplish two things, namely, bring in crops of low seasonal labor needs and broaden the employing base during a twelve months' period.

Suggested Questions for Discussion.—Out of the foregoing arises a number of questions which may well receive consideration here.

In what states does farm labor today present a real problem or problems? What *are* these problems? (Calls for a canvass of those present from each state.)

To what extent are the following questions applicable to the region served by the Western Farm Economics Association, how should those of general interest be approached, and what possible solutions present themselves?

1. Are agricultural wages as high as farmers can afford to pay? Too high?
2. Can time wages be replaced to advantage with piece work? In which enterprises? For what tasks?
3. Can operators plan work to (a) do work themselves or with regularly employed help, (b) use local people or reduce need for seasonal help? How?
4. Can plans be initiated to dovetail needs of agriculture and other industries drawing upon a common supply of labor? In what ways?
5. Is the present length of work day proper? Too long? Too short?
6. Can housing conditions be improved?
7. Should federal, state, local authorities, or groups of farmers encourage the building of community camps or community laborer homes? Should they undertake to finance such building? Under what restrictions?
8. In the event of labor troubles is the use of an arbitration board feasible? Under what conditions? With what safeguards?

In Conclusion.—This paper as been designed to do two things: namely, to present something of the situation as of today, and to offer some questions for your thoughtful consideration, without any attempt on my part at this time to present specific and final answers.

MEASUREMENT AND CORRECTION OF ASSESSMENT INEQUALITIES ON AGRICULTURAL LANDS IN MONTANA*

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Among the agricultural maladjustments which have followed in the wake of the World War, one of the most important is the inequitable burden of farm taxes. Not only does the burden fall heavily upon farm lands as a whole, but taxes are generally assessed in such a way that they do not bear a close relationship to ability to pay. That is to say the burden is not distributed equitably among the farmers themselves, and thus excessive burdens fall upon some lands contributing to tax delinquency, farm tenancy, and related farm problems.

Equitable distribution of the taxes requires, among other things, that farm lands be assessed at a fair and just valuation. In most states lands are assessed theoretically according to their sale or market value. However, in actual practice sales values are too often unavailable even for representative samples of land, and in addition speculative forces frequently so affect sales values for temporary periods that they are not recognized as being representative of the "true" or real economic value of the land. Even if sales values were satisfactory and available for representative portions of the lands, a scientific classification of the lands into various grades would be necessary to apply the sales values to the comparable lands. But even where a scientific soil classification is available it is not commonly used for assessment purposes.

The Productivity Value Basis for Determining Assessment Inequalities

In the long run, the most reasonable basis for determining what land is worth is its ability to produce an income. In other words, a reasonable value based on its productivity is that upon which it will return a fair rate of interest. In order to determine the productivity value of agricultural land it is necessary to have: (1) a scientific land classification based upon a soil survey, yield data, and related factors which affect its economic value, and (2) farm management data showing costs of production and probable net returns which may be capitalized to secure the "productivity" value.

* Contribution from Montana State College, Agricultural Experiment Station, Paper No. 94 Journal Series.

The various agricultural adjustment programs of recent years, beginning with the domestic allotment plan for wheat farmers, have caused a large amount of economic and yield data to be made available for many farm lands. These data, covering in many cases detailed use and yield records for ten years (1928–1937), together with agronomic, soil, and farm operating cost data which have been accumulated over a period of several years, now make it possible to compute readily the productivity value of farm lands.

The first step in determining productivity value is to classify the lands into different economic grades based on soil survey, topographical, climatic, and production data. In the case of Montana, the lands in 21 counties have been divided into four grades of farm land and five grades of grazing land. The productivity of the four grades of farm land is expressed in terms of the yield of spring wheat which normally can be expected (using an alternate summer fallow system). The grades are as follows: First grade farm land, 22 bushels or over; second grade, 16 to 21 bushels; third grade, 12 to 15 bushels; and fourth grade, 8 to 11 bushels.[1]

The carrying capacity of the five grades of grazing land is expressed in terms of the number of acres required to graze a 1,000-pound steer for a 10-month grazing season. The grades are as follows: First grade grazing land, 18 acres or less; second grade, 19 to 27 acres; third grade, 28 to 37 acres; fourth grade, 38 to 55 acres, and fifth grade, 56 acres or more.

The above yield and carrying capacity data must next be converted into acre values. In other words, based on such productivity data, what is each grade of farm and grazing land worth per acre? A study of ranch operating costs in different parts of Montana indicates that if all of the land is owned, a ranch operator can afford to invest in land and improvements, an average of $50 to $60 per cow and $12 to $15 per ewe.[2] According to this, the maximum value of the different grades of range land based on their carrying capacity as indicated above and the long-time average prices,[3] is as follows: First grade, $3.00 per acre; second grade, $2.50; third grade, $1.50; fourth grade, $1.00; and fifth grade, $.75.

[1] An analysis of wheat yield records submitted by farmers on wheat allotment applications under the Agricultural Adjustment Act in a sample area comprising some 1,210,000 acres covering parts of 6 counties, indicates that with the exception of second grade land, the various grades have produced approximately the yields credited to them. Except for one area, second grade farm land has also yielded as credited. These data cover the eight-year period 1928 to 1935 inclusive. Precipitation is a very important factor determining crop yields in this area. During the eight years covered by the data the average precipitation was 13.43 inches per year which is nearly 2 inches less than the forty-four year average of 15.23 inches.

[2] See "Readjusting Montana's Agriculture: V, Economic Changes in Montana's Livestock Production," Montana Expt. Sta. Bul. No. 311, Feb. 1936.

[3] The average farm price of beef for the 40-year period 1890 to 1930 was used to calculate the expected average net returns to the land. For details of method, ranch operating cost items, etc., see Saunderson, M. H., "Some Materials Relating to Livestock and Land Valuation," Mimeographed; or Saunderson, M. H., and Bolster, H. G., "Lease Values of Montana Range Lands," Mimeographed.

The productivity value of first, second, and third grade farm land is determined from the net return to land used in a straight summer fallow-wheat rotation, capitalized at the rate of 5.5 per cent.[4] Fourth grade farm land has been valued as third grade grazing because this grade, with average wheat prices, is not profitable for farming and has a greater comparative advantage in grazing.

The size of the farm unit used as a basis for determining the cost of operation on these different grades of farm land is 800 acres for first grade, 1,000 acres for second grade, and 1,100 acres for third grade.[5] Eight hundred acres is considered a fairly economical operating unit on first grade farm land, but the larger units of 1000 and 1,100 acres on the second and third grade land are necessary to provide a reasonable family income.[6] Eighty cents per bushel is used as the price of wheat in computing the long-time expected annual gross income on the various grades of farm land.

The approximate values computed for the four grades of farming land are, in round numbers, as follows: First grade farm land, $35 per acre; second grade, $18 per acre; third grade, $3; and fourth grade, $1.50. These values have been computed with two purposes in mind: (1) to demonstrate a method of computing productivity value for assessment purposes, and (2) to determine the productivity value of a sample area of Montana farm lands in order to measure the inequalities in the present assessed valuations. The sample area to which these values apply includes parts of Cascade Chouteau, Liberty, Pondera, Teton, and Toole counties in central Montana, comprising a total of approximately 1,210,000 acres and including all grades of Montana dry farming and grazing lands.

Inequalities Indicated by Ratios of Assessed Values to Productivity Values

A comparison of the 1936 assessed valuations with the productivity values computed above shows the existence of many inequalities in assessment. A considerable portion of the lands are assessed at four times their productivity values while others are

[4] A preliminary analysis of Montana farm mortgages indicates that about three-fourths of the strictly real estate mortgages on farm lands are held by the Federal Land Bank. The combined interest and carrying charges on these mortgages is in most cases 5.5 percent of the principal.

[5] The cost of operation on various sizes of farm units was secured from unpublished data compiled by E. A. Starch and H. H. Stippler, Department of Agricultural Economics, Montana Experiment Station.

[6] These acreages do not correspond to acreages in present farm units on these grades of land, but are considerably larger. They are considered more in keeping with probable best use of the land. If the productivity value of Montana farm lands was computed on the basis of present average sized farm units and average prices, only first grade land would have any value, it being the only grade which, on the average, provides a return on the capital invested after a reasonable allowance for family living costs and other operating expenses are deducted from the gross return. Some of the factors influencing the acreages used to determine the productivity value of first, second, and third grade farm lands are: (1) the number of people to be supported by the land, (2) the standard of living to be maintained, (3) the expected price of farm products, (4) the size of unit which will permit reasonably economical production, and (5) the limits to which farm operators may be expected to go in making changes and adjustments in their farm organization. Valuable information and suggestions concerning probable best use of the various grades of land in the sample area were secured from an analysis of data compiled by the Department of Agricultural Economics, Montana Experiment Station and staff members, and from R. B. Haight, Land Planning Specialist Land Utilization Division, Resettlement Administration.

assessed at less than half. Taking the sample area as a whole, the ratio of assessed value to productivity value averaged 1.05, but the ratios commonly ranged from as low as .30 on some parcels to more than 5.00 on others. Some of the most glaring inequalities which were found to exist were those among the different grades of land and those among the counties, while lesser inequalities were found among school districts, among lands of the same grade devoted to different uses, and among different sized units.

Inequalities among grades of land.—Inequalities of this type were by far the greatest of any which occurred in the assessment of either farming or grazing lands in the sample area. The ratio of assessed value to productivity value bears a direct relationship to the grade of land, the poorer grades of land being progressively overassessed. First grade farm land is consistently assessed at less than half its productivity value, second grade at less than two-thirds, while all other grades of farming and all grades of grazing land are overassessed, the ratio of assessed value to productivity value averaging about 3 to 1 (see table 1).

An analysis of the relation between assessed value and productivity value for sample lands taken at random from the 21 counties in which the soil survey has been completed and the land classified into various economic grades shows a disparity almost identical with that in the sample area. This indicates that inequality in assessment among grades of land is general.

TABLE 1. COMPARISON OF ASSESSED VALUE TO PRODUCTIVITY VALUE FOR EACH GRADE OF LAND IN THE SAMPLE AREA, 1936

Class of land	Acres	Assessed value	Assessed value per acre	Productivity value	Productivity value per acre	Ratio of ass'd val. to produc. value
Farm land:						
1st grade	79,297	$1,266,964	$15.98	$2,756,821	$34.77	.46
2nd grade	72,524	749,274	10.33	1,302,372	17.96	.58
3rd grade	80,436	787,791	9.79	242,526	3.02	3.25
4th grade	266,574	1,677,697	6.29	410,717	1.54	4.08
Grazing land:						
1st grade	16,168	114,116	7.05	47,404	2.93	2.41
2nd grade	17,247	98,829	5.73	41,916	2.43	2.36
3rd grade	107,715	678,148	6.30	164,537	1.53	4.11
4th grade	34,271	187,176	5.46	36,539	1.07	5.12
5th grade	1,846	10,877	5.89	1,393	.75	7.80

Inequalities among counties.—The second most important type of inequality is the disparity in assessment of lands of the same grade in different counties. An analysis of the assessment of farm

lands in the portions of the six counties included in the sample area, indicates that among these six there is a variation of more than 30 percent above (a ratio of more than 1.30) to more than 25 percent below the average assessment (a ratio of less than .75). The grades of land in each county were compared only with the same grades of land in the other counties. Apparently the need for revenue in the different counties and the peculiarities in the judgment of the different county assessors and their deputies, rather than "true value," are the factors which determine the assessed value of farm land in the sample area.

Inequalities among school districts.—While not as large as the foregoing inequalities, the disparities in assessment among school districts are sufficient to receive serious study. Variations among districts from the county average assessment for the same grades of land are frequently more than 20 per cent. Without a scientific classification and valuation of the lands it is very easy for local opinion to influence values so that they are out of proportion to productivity values. The general practice followed by assessors to zone and assess lands according to their distance from shipping centers, the county seat, or railroads, may also account for inequalities among school districts. However, with modern means of transportation and good roads, distance from market plays an increasingly less important place in the determination of land values, and should not be given the weight now accorded it by assessors.

Inequalities because of different land use.—Another inequality, not so important as the three preceding, is that between lands of the same grade devoted to different uses. An analysis of lands in the sample area shows that all grades of land used in wheat farms are assessed at about a dollar an acre more than the same grade of land in a livestock unit. Apparently there is a general tendency to assess tilled land as farm land and sod land as grazing regardless of its natural characteristics.

Inequalities among different sized units.—There seems to be a general tendency to assess all land in units of less than 160 acres higher in proportion to productivity value than lands of the same grade in larger units. Small parcels of grazing lands are the most out of line, with assessed valuations per acre nearly 40 per cent above similar grades of grazing land in larger units. However, except for this overassessment of small units of grazing land, inequalities among different sized units as indicated by the relationship of assessed values to productivity values, are too small to be of any great significance.

Conclusions regarding assessment inequalities.—The above analy-

sis indicates that under present methods of assessing Montana farm lands, assessments do not correspond with productivity value. These inequalities are serious, especially the apparently consistent practice of overassessing the poorer grades of land. The maladjustments resulting from this failure of assessments to tally with productivity value—the best available measure of ability to pay—are important factors contributing to tax delinquency and related problems, the growth of farm tendency, and improper use of land.

There are several reasons why present assessments do not correspond with productivity values: (1) It is impossible by casual observation or with the usual amount of training of the average assessor to distinguish accurately between the various grades of land. The services of a trained soil scientist are necessary to make a scientific soil classification upon which an economic analysis can be made based on farm management and production data, to determine the worth of the lands under prevalent prices and conditions. (2) Even in areas where the assessor possesses a scientific soil classification and economic grade map and attempts to use it, political expediency too frequently forces him to assess lands nearer to what the people of his county think the different lands are worth than strictly according to the land classification. It is common knowledge that people habitually overrate poorer grades of goods generally, including land, and underrate the best. In other words, it is difficult to convince most people that the comparatively large spread in values between the best and poorest grades, particularly of farm land, are really justified. (3) In counties with a high percentage of poor land the need for revenue has caused values to be maintained at a level higher than the people or the assessor himself believes are justified. The usual response to complaints of taxpayers in such areas is that it doesn't help any to reduce assessments because just so much money is needed to run the county business anyhow, and if the assessments are lowered the millages will have to be raised. This, of course, ignores the problem of inequalities in assessments among individual property holders. (4) The practice of zoning and assessing lands according to their distance from the county seat or shipping points as previously indicated, causes lands of the same grade closer to such points to be assessed higher than corresponding grades further removed from said points. In some cases, such a disproportionate weight is accorded location that the differences in values due to situs are greater than those due to productivity or grade. (5) The large number of individuals who assess land in the different counties with no central coordinating agency to establish uniform standards, is bound to result in great variations in assessments.

Relation of Assessment Inequalities to Needed Adjustments

Generally speaking, tax delinquency is most frequent in areas of low grade soil where the assessment is most out of line with the productivity value of the land. In most cases, tax delinquency is due to the inability of the land owners to make the tax payments, although in some cases taxes may be left unpaid as a protest against what the owner regards as an unfair assessment and an excessive tax burden.

Taxes are a direct out-of-pocket cost which must be met with cash. When the farm business is sufficiently profitable to meet all costs, the cash costs are paid in the order of their urgency. Taxes must be paid sooner or later in order to hold the land, hence during the lean years (which come all too frequently to farmers on low grade land), money needed to eventually pay the mortgage or for the proper support of the family is often used to pay the taxes. If one year's taxes are left unpaid the burden is doubly great the following year. Finally, payment must be made or the land will be lost through tax deed. In an alarming number of cases land has already been lost through tax deed and mortgage foreclosure.[7] In these cases the onetime land owner becomes a tenant.

The loss of land through tax deed and mortgage foreclosure, together with the discouraging effect of a disproportionate tax burden upon acquiring land by purchase, is a combination which would seem to contribute to a high rate of farm tenancy. For example, many Montana ranch operators, especially in areas of low grade range land, would rather lease their range land than own it because of the disproportionate tax burden.

Instability in the control of range land is contributing to destructive range management practices.[8] Adjusting the assessment of low grade range lands into line with their carrying capacity would tend to encourage private ownership, and, presumably, better range management practices. The same relationship probably exists between the ownership and the conservation of Montana's dry farm land. It seems reasonable to believe that farm owners will tend to be more constructive conservationists than farm tenants.

The passage of land into the hands of nonresident owners can be reduced only when resident farm ownership is made possible and desirable. The possibility of resident farm ownership in Mon-

[7] See "Readjusting Montana's Agriculture: VIII, Tax Delinquency and Mortgage Foreclosures," Mont. Agr. Expt. Sta. Bul. No. 319, May 1936. For the effects of tax delinquency and mortgage foreclosures on changes in land ownership, see "Montana Land Ownership," Mont. Agr. Expt. Sta. Bul. No. 322, June, 1936.

[8] See "Readjusting Montana's Agriculture: V, Economic Changes in Montana's Range Livestock Production," Mont. Sta. Bul. No. 311, Feb., 1936.

tana depends in many cases upon an increased and stabilized farm income; the desirability depends upon an adjustment of taxes and other land charges in line with the productivity of the land. Proper use of the land is probably the most important single adjustment which is needed to increase and stabilize farm incomes. On the lower grades of land proper use usually means larger units and a diversion into grazing of considerable acreages now being farmed. If resident operators are to acquire larger acreages by ownership and are to use the land less intensively than in the past, adjustment in assessments into line with proper use and productive capacity of the land is mandatory.

Suggestions to Improve Assessments

The two most important evils growing out of the present method of assessing Montana lands are (1) the failure to assess land in accordance with its ability to pay (productivity), particularly the tendency to overassess the lower grades; and (2) the lack of any uniformity in assessment policy among counties or among various areas of the state. The correction of these evils involves establishing: (1) the factual basis upon which assessment can be made according to productivity value, that is, making a scientific soil classification and an economic valuation of the land so that correct assessment values can be computed; and (2) a state agency to administer such an assessment system and enforce uniform compliance with established assessment standards over the entire state.

After the soil characteristics of the area are available from the field survey, the lands should be classified into economic grades on the basis of their expected average productivity (yield of wheat in the case of dry farm lands in the Northwest and carrying capacity in the case of range lands).[9] Four grades of farming land and five of grazing might be established, with the yields and carrying capacity, respectively, indicated above.

These grades would be quite permanent unless some physical change such as severe drouth, soil erosion, or overgrazing occurred for a sufficiently long period to permanently change the productivity of the land. In order to take account of such possible changes, the classification of the lands might be adjusted every few years

[9] Classification of irrigated lands into economic grades is much more difficult than in the case of dry farm lands and range lands because no one crop or use predominates so exclusively on irrigated lands. However, the grades of irrigated land in several areas of Montana could be based on their productivity of sugar beets as follows: First grade irrigated land—18 tons and over per acre; second grade 15 to 18 tons per acre; third grade—10 to 15 tons per acre; and fourth grade—6 to 10 tons per acre. In order to make the classification applicable under the varied irrigation conditions found in Montana, the relative productivity of the different grades of irrigated land might also be expressed by their production of alfalfa or some cereal crop or both.

(perhaps five or thereabouts) to correct for changes in productivity. Yield and carrying capacity data will be readily available in years to come from agricultural adjustment and control programs already inaugurated, and might form the principal basis for such classification adjustments. A field check of soil and forage cover might be made, say every tenth year.[10] and the information thus obtained, supplemented by productivity data from the other sources indicated, should form the basis for keeping the classification up-to-date.

The next step is to translate these physical characteristics into economic values or dollars. In computing the value of land it should be kept in mind that the future increment (value in the future) as well as current income, should be taken into account so that land values would remain more stable than the net annual returns, and allow assessments to keep fairly well in line with the reasonable investment value of the land. These values so established would be the basis of assessment for the entire state and would remove local bias, relieve county officials from considerable political pressure, and be more scientific and impersonal.

The local governmental units would still have power to determine the amount of their local tax burdens by controlling millage levies within certain legal limits as at present. However, any differences in tax burdens among operators of the same grades of land would, under the suggested plan, be due to differences in millage levies voted by the people in the local school districts and counties or by their officials, and would theoretically represent, for the most part, differences in the amount and kind of public services rendered by the local units. At present, as this study has pointed out, large differences exist because of an unscientific and unstandardized assessment system.

If the above suggested changes in assessment procedure were made, other adjustments in methods of supporting local governmental services and in the organization of the units rendering such services would be desirable and, in some areas, imperative.[11] Some adjustments in the tax system would have to be made in certain areas to provide for the support of essential services such as schools, and reductions in the cost of operating the county government by improved administrative organization would also be essential.

[10] Field checks are needed less frequently the longer an area is farmed. The most rapid and pronounced soil changes tend to occur in the first decade or two following breaking of the virgin sod. Consequently, field checks may be needed less and less frequently in the future, but the length of the intervals should be determined by trained soil scientists.

[11] In the case of the sample area used in this analysis, comprising about 1,210,000 acres and covering portions of 6 counties, the total assessed value of these lands would be reduced on an average of only 4.5 percent below their 1936 assessed value if the new classification and valuations proposed were adopted in place of the present assessments. However, this area contains a more than average proportion of the better lands at least for Montana.

STATE OWNERSHIP OF SCHOOL LANDS IN SELECTED AREAS IN COLORADO AND NEBRASKA

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Public ownership of lands is a problem which has been discussed ever since the combination of land and governments has existed. This limited study is intended to point out a few facts relating to selected publicly owned lands in comparison with privately owned lands in the states of Colorado and Nebraska. The cases selected represent typical situations in the type-of-farming areas in which the lands are located. It is hoped that such facts may aid in stimulating sufficient interest that a more complete study may be made of the existing situation in those states where there are large acreages of public agricultural lands.

The states of Colorado and Nebraska lease approximately 4,170,000 acres of agricultural and grazing lands. Of this amount Colorado leases 2,570,000 acres and Nebraska leases 1,600,000 acres.[1] About 6 percent of the leased lands in Colorado is leased for agriculture. The remainder is leased for grazing. Undoubtedly a higher percentage of the leased lands is used for agricultural purposes in Nebraska than in Colorado.

The school lands in Colorado are located largely in the eastern half of the state. There are some lands in the northwestern and southwestern parts. In Nebraska the school lands are mostly located in the western half of the state with scattering sections in the eastern half. Before discussing the facts relating to the selected public lands, a brief summary will be given of the laws concerning the state lands.

The State Board of Land Commissioners in Colorado is required to perform the duties of leasing state school lands and of collecting the rentals under such regulations as are required by law. The term of the agricultural and grazing leases is five years. The basis for the amount of rentals depends upon the productivity of the lands. Competitive bidding occurs when there are conflicting applications for the leasing of a given unit of school land. If leaseholders or any other individuals desire to purchase school land they may make application by paying the proper fees. The land is then sold to the highest bidder provided the amount of the bid exceeds the minimum appraisal price set by the Board of Land Commissioners and

[1] Paul W. Gates, Land Policy Section, Agricultural Adjustment Administration. A summary of the Status of Federal and State Lands, Part VII, Sec. VI, of the Supplementary Report of the Land Planning Committee to the National Resources Board. Washington, D.C. 1935.

provided the sale meets with the approval of the Board. A leaseholder may assign his lease to other individuals. State school lands are exempt from taxes in the State of Colorado.

In the State of Nebraska, the governor, secretary of state, treasurer, attorney general, and commissioner of public lands and buildings under the direction of the legislature constitute a board of commissioners for the sale, leasing, and general management of state lands. Lands are leased on a cash-rental basis, the same as in Colorado. The term of the leases is 25 years. For the use of the school land all leaseholders are required to pay 6 percent on the appraised value of the land they lease. The appraisal is made by the county board. The state administrators may reject the county board's appraisal and may make their own appraisement. Applicants then have the choice of accepting the latter appraisal or asking for reappraisal by freeholders in the county. Leaseholders who have made the required rental payments may renew their leases after a 25-year period without competition. As in Colorado, any leaseholder may assign the lease to other individuals. School lands in Nebraska are not for sale except in special cases. The state pays a tax on its land equivalent to the regular school levy on the assessed valuation of the school land; a law to this effect was adopted by the legislature in 1922.

Data in this study are based upon information regarding a 640-acre state school section in type-of-farming area 12 in northeastern Colorado and a 640-acre school section and a 160-acre privately owned tract of land in type-of-farming area 188B in southwestern Nebraska.[2]

All the lands selected were representative, as far as productivity is concerned, of the lands in the type-of-farming area in which these lands were located. For example, the crop land on the school section located in Colorado was given a productivity index number of 101 in comparison with an index number of 100 for all crop land in the county in which the land was located by administrators of the soil-conservation program in 1936. The crop land on both the public and private acreages in the farming area in Nebraska was given the productivity index number of 102 compared with the number 100 for crop land in the county. Crop yields in the counties where the selected lands were located have been approximately the same as the average yields for the type-of-farming areas as a whole over the period of years studied.

The principal crops grown in these farming areas are wheat and corn. About 65 to 75 percent of the farm land in the areas is under

[2] See Type of Farming bulletins No. 418 in Colorado and No. 299 in Nebraska for location of farming areas.

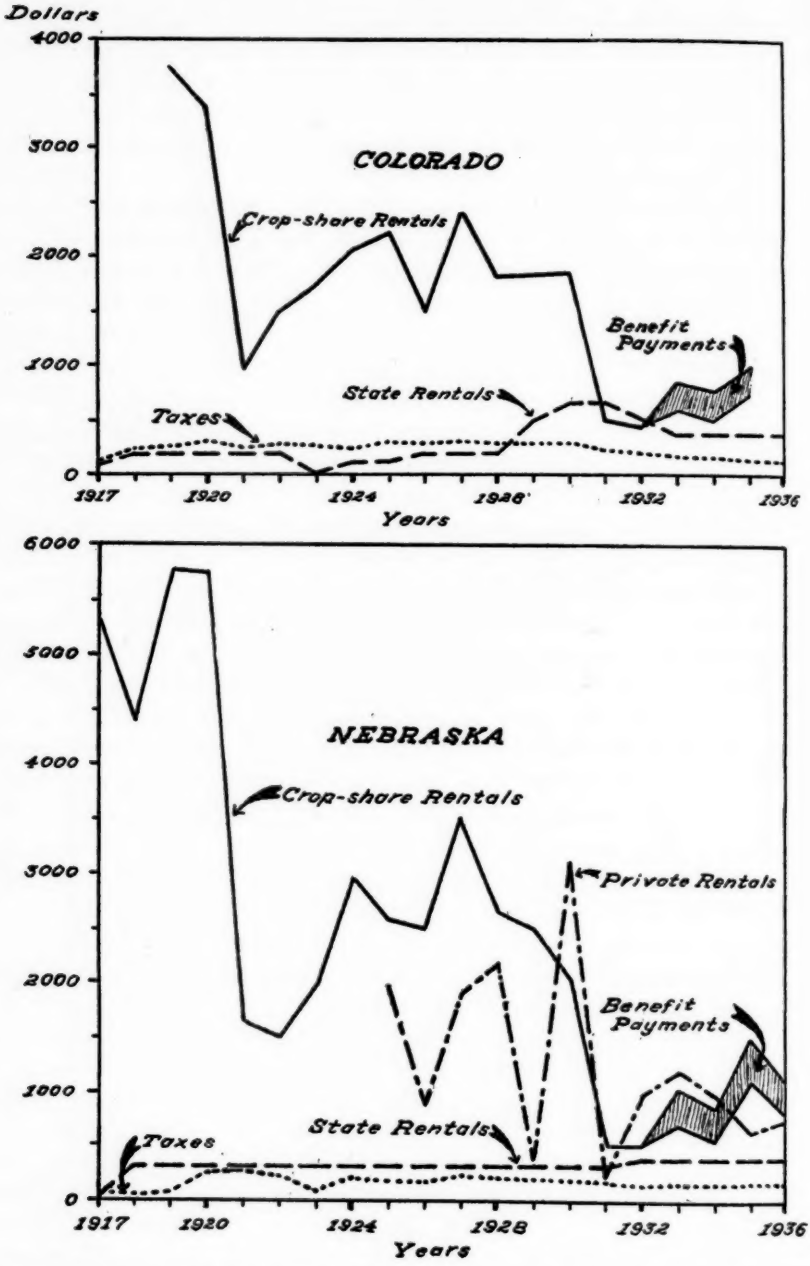
cultivation. The land is level to slightly rolling and is highly productive during years of normal rainfall. The average annual precipitation is about 17 inches. Farms are relatively large in size, the most typical occupying 320 to 640 acres. Many farmers cultivate more than 1,000 acres. Thus far the areas have been particularly adapted to cash crop farming.

A comparison of the actual rentals which the states of Colorado and Nebraska and the private landowner received from the selected lands may be made by inspection of the accompanying charts and table.[3] The average annual incomes were $0.42 and $0.49 per acre from the leased school lands in Colorado and Nebraska, respectively, for the 20-year period 1917–36. During the period 1925–35 the average incomes per acre in crops from the 3 units of land were: $0.58 on the school land in Colorado, $0.54 on the school land in Nebraska, and $2.11 on the private land in Nebraska. During the period 1917 to 1924 the actual income received from the section of school land in Colorado was less than the average income received from other school lands in the farming area. Thus this period was not considered typical. However, during the period 1925–35 incomes from both the Colorado and Nebraska sections were typical of the average incomes from other school lands in the farming area. Therefore, the period 1925–35 was chosen as representative.

The estimated crop-share rentals represent one-third of the gross income secured from the production of the principal crops grown in each type-of-farming area plus benefit payments. Production figures for each year were obtained by applying average type-of-farming area yields to the acreages of the principal crops harvested each year. It was considered that 74 percent of the crop land was harvested each year during the whole period except for the years 1934–36 inclusive, when diversion of acres was made by farmers so that they might comply with the AAA and soil-conservation programs. Average prices each year received for the principal crops by farmers in each state were then used to determine the annual gross income from the crop land.

The estimated crop-share rentals for the type-of-farming area in Nebraska averaged higher than the actual crop-share rentals received by the owner of the selected private land during the period 1925–35. Yields in the community where this privately owned land was located were equal to the farming area yields for the whole period. Yields were higher, however, during the early part of the

[3] The data charted and given in the table are based upon information given in the U. S. Census, Colorado and Nebraska Agricultural Statistics, special reports from the Register of the State Land Board of Colorado and the Commissioner of Public Lands, and the State Superintendent of Public Instruction in Nebraska, individual AAA and Soil Conservation contracts, and special reports from the agricultural agents, county assessors, and treasurers of the counties located in the selected farming areas, a report from the National Mortgage Loan Company of Lincoln, Nebraska, and the type of farming bulletins of Colorado and Nebraska.



Estimated crop-share rentals, actual federal wheat-allotment and soil-conservation payments, actual rentals paid to the state governments, and prospective taxes on 640-acre tracts of common school lands in type-of-farming area 12 in Colorado and area 188B in Nebraska, 1917–36, and actual rentals paid on a comparable acreage of private land in Nebraska 1925–36.

period and lower during the latter part. Income from the private land during the first half of the period was far less than the estimated income for the farming area; however, they were identical during the latter part of the period after making allowance for variation of yields in the area.

In order to have conservative figures for comparative purposes it has been considered advisable to reduce the estimated crop-share rentals to those of the privately owned farm in Nebraska, or 29 percent. The same reduction was made in the estimated rentals relating to the Colorado farm. Comparisons will be made by use of these adjusted rental figures during the 11-year period 1925–35.

Leaseholders of state lands have a unique advantage. Those individuals who leased the selected acreages of state school lands paid only 37 and 26 percent as much in rentals to the states of Colorado and Nebraska as their neighboring tenants paid to owners of private lands. If the same relationship occurs during the next 11 years that has occurred during the last 11 years and crop-share rentals average the same, the annual advantage to leaseholders of first-grade farming land in type-of-farming area 12 in Colorado will be about $32,000. The annual advantage to the leaseholders in farming area 188B in Nebraska will be about $160,000. This would amount to $2,000,000 for the next 11 years.

The taxes on crop land adjoining the school lands in Colorado averaged $0.36 per acre in crops during the years 1925–35. In Nebraska the taxes averaged $0.31 per acre. This amounts to a half-million dollars in prospective taxes which would have been paid on school lands in the two type-of-farming areas in Colorado and Nebraska for the 11 years if the land had been privately owned. The taxes were 62 and 57 percent of the lease incomes received by the corresponding states.

Obviously, a portion of the rentals paid to the state governments for the use of these lands finds its way back to the counties in the state which in turn tends to lower land taxes. However, if the lands were sold at a reasonable price and the interest on the invested proceeds of the sales was apportioned to the counties, this apportionment would take the place of the rentals.

As stated previously, the state of Nebraska pays the regular school levy on the assessed valuation of its school land. Thus, during the period 1925–35 the state paid about 15 percent as much taxes on its school land as was paid on adjoining, equally productive, privately owned land. The percentage was derived by use of the following data: The school and private lands were appraised at $9.00 and $24.00 per acre, respectively; the school levy averaged 41 percent of the total tax on the private land.

A Comparison of Items, as Indicated, Relating to State School and Privately Owned Lands in Similar Type of Farming Areas, in Northeastern Colorado and in Southwestern Nebraska, for 11-Year Period 1925–35[1]

Item	Colorado	Nebraska	
	School land	School land	Privately owned land
Acres of land considered in calculation	640	640	160
Per cent of land in crops	97	97	97
Index of productivity of crop land	101	102	102
Actual rentals received by landowners per acre in crops	$0.58	$0.54	$2.11
Estimated crop share rentals per acre in crops[2]	$2.20	$2.98	$2.98
Per cent actual rentals of estimated crop share rentals	26	18	71
Adjusted average crop share rentals per acre in crops	$1.56	$2.11	$2.11
Per cent actual rentals of adjusted crop share rentals	37	26	100
Monetary advantage favor of leaseholders per acre in crops	$0.98	$1.57	$0.00
Estimated acres of school land in crops in each farming area, 1935	33,000	102,000	
Estimated annual favors to leaseholders in areas next 11 years on basis of last 11 years	$32,340	$160,140	
Prospective taxes on school land per acre in crops if privately owned	$0.36	$0.31	
Total prospective taxes on existing school crop land in areas per year	$11,880	$31,620	
Per cent taxes on privately owned lands of adjusted share rentals	23	15	15
Per cent taxes on privately owned lands of actual rentals received by landowners	62	57	15
Average wheat allotment payments per acre in crops ($\frac{1}{3}$ of total) 1933–35	$0.44	$0.56	
Per cent benefit payments of adjusted crop share rentals 1933–35	44	43	
Per cent benefit payments of actual rentals received by state 1933–35	76	90	
Net rentals to landowners assuming all taxes were levied and paid per acre in crops[3]	$0.22	$0.23	$1.80
Index of net rentals (net rentals on privately owned crop land = 100)	18	13	100

[1] For economy of space relationships are given in the one table
[2] Includes benefit payments 1933–35.
[3] Comparable net rentals to Colorado private landowners $1.20 per acre in crops.

Federal benefits were paid to leaseholders of state lands as they were paid to owners of private lands. Owners of private lands share the benefit payments with their tenants as they share the production of crops, that is, if the crop land is leased on a crop-share rental basis. The usual share which landowners received in these type-of-farming areas was one-third. The state governments received none of the benefit payments on the lands selected because the lands were leased on the cash-rental basis. An individual has the opportunity of leasing the state school land on a cash-rental basis from the state and sub-leasing the same land to a tenant on the crop-share basis and receiving one-third of the benefit payments.[4]

The average one-third share of the total benefit payments amounted to $0.44 and $0.56 per acre in crops on the school sections located in Colorado and Nebraska, respectively, during the years 1933–35 inclusive. Tenants were required to divert acres of crop land to suggested uses during the years 1934 and 1935 in order to secure these payments. In case the state land was leased and then sub-let to actual farmers as stated above the original leaseholder received enough money in the form of wheat-allotment payments to pay 76 percent and 90 percent of the cash rentals on the selected school sections in Colorado and Nebraska, respectively. Thus, the net annual costs to the original leaseholders were $0.14 and $0.06 per crop acre during each year of the 3-year period 1933–35 after transferring federal wheat-allotment payments to the treasuries of the states in which the lands were located. The corn benefit payments were not included in the study.

If the states had to pay taxes on their lands equal to taxes paid on private lands their net rentals would be considerably less than the net rentals on private lands. Total revenues received by the state governments for the use of their lands amounted to $0.58 and $0.54 per acre in crops on the two farms studied in Colorado and Nebraska during the period 1925–35. The net rentals which the states would have received, provided the customary taxes had been levied and paid on their lands, were estimated at $0.22 per acre in crops on the Colorado farm and $0.23 per acre on the Nebraska school land. The latter figure is comparable to the net rental of $1.80 received by the owner of land adjoining the school section in Nebraska. The $0.22 net rental for Colorado is comparable to $1.20, the estimated net rental received by private landowners in the farming area in Colorado. On the basis that the net rentals on

[4] In Nebraska "about 60 percent of the present leases are held by speculators and sub-let to actual farmers and stockmen." A. E. Sheldon, Land Systems and Land Policies in Nebraska. Nebraska Historical Society, p. 285.

the selected acreages of representative crop land in the given type-of-farming areas of each state are made to equal 100, the comparable index numbers for the net rentals for the farms in Colorado and Nebraska are 18 and 13 respectively, during the 11-year period 1925–35.

The present administration of state lands increases the tenancy problem. Leaseholders who pay less than the customary rentals paid for the use of land in their community are acquainted with their advantages. It would not be good business practice for them to buy the land they now lease from the states. It is better for them to remain as leaseholders rather than become owners.

If this situation exists on other agricultural lands in other farming areas in Colorado and Nebraska and in other states there appears to be a need for further study of this problem. The National Resources Board reported in 1935 that there were 91,026,223 acres of land owned by state governments and 430,343,395 acres owned by the Federal Government. Thus the public lands occupy about one-fourth of all the land in the United States. Only a small portion of this land would be classified as agricultural farming land, the type of land selected for this study. However, if the existing situation were corrected it would undoubtedly encourage private ownership of public lands in selected agricultural areas where private ownership is particularly adapted.

Suggested alternatives open to the state governments which would necessitate change of law or administrative policy and practice in order to correct the present situation, are:

1. Continue with the cash-lease basis; make rentals more nearly parallel the income which rightfully belongs to the landowner for the use of the land. To eliminate tax maladjustments, the state governments would need to pay the local government taxes on its own land equivalent to those levied on adjoining lands of equal productivity.

2. Change to the share-rental basis on crop land, and continue with the cash-rental policy on pasture lands. Place the administration in the hands of a commercial farm-management firm which would receive something less than 10 percent of the landowner's share for administration or leave the administration in the hands of present administrators. Payment of local taxes by the state governments constitutes a phase of this program.

3. The state might assume responsibility and risks of being both landlord and operator. It may hire its laborers, buy its own machinery, cultivate the soil under its own management, and sell its

produce upon the market and take the gains or losses as they come. Such a system of public agriculture is not advocated.

4. Sell the land to the highest bidder during a time when values are reasonable and invest the funds. Reports indicate that the policy of selling the state lands and investing the funds has been as remunerative as the policy of leasing state-owned lands on a cash-rental basis. Certainly, under a constitutional government, interest payments on invested school funds plus revenues from the taxation of private property are capable of supporting an adequate educational system.

MARKETING NEW YORK APPLES

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In New York State the growers sold more apples outright in 1932–35 than they consigned. Records on the sale of more than 2,500,000 bushels of apples from 1932 to 1935 in different parts of New York State show that nearly twice as many apples were sold outright as were consigned. For the three areas studied the only exception was in the Champlain Valley in 1933. In 1934 and in 1935 less than one-third of the Champlain Valley apples were consigned. In the Hudson Valley about one-third and in Western New York less than one-third of the apples were consigned.

The returns to the grower were usually more for apples sold outright than for apples consigned. In calculating the net returns per bushel the grower's cash expenses for commission, storage, transportation, and package were deducted from the sale price.

Northern New York: Champlain Valley

The Champlain Valley growers received for their better grades of McIntosh sold outright an average of 10 cents more per bushel in 1935, 26 cents more in 1934, but 2 cents less in 1933 than they received from consigned sales (Table I).

Table I. Returns from Apples Consigned and Sold Outright
Northern N. Y. Champlain Valley, 1933–35

Year	Net Returns per Bushel for Apples Sold Wholesale					
	Variety					
	McIntosh Better Grades		McIntosh Poorer Grades		Fameuse Better Grades	
	Outright	Consigned	Outright	Consigned	Outright	Consigned
	cents	cents	cents	cents	cents	cents
1933	88	90	53	56	46	39
1934	115	89	59	25	70	75
1935	87	77	55	40	40	24
Average	97	85	56	40	52	46

Most of the apples sold on consignment from the Champlain Valley were shipped to New York. Truckers, supplying the local towns and cities in Northern New York, bought most of the apples that were sold outright. Most of the better grades of McIntosh were shipped to New York, but most of the poorer grades were sold

locally. Farmers did not generally take the risk of shipping low grade apples to New York that would sell poorly on the market. From 1933 to 1935 the poorer grades of McIntosh when sold outright returned 16 cents more per bushel than when consigned.

In 1935 some of the better Fameuse apples shipped to New York hardly sold for enough to pay transportation, storage, and commission charges. The consigned shipments averaged only 24 cents per bushel while outright sales averaged 40. In recent years the total returns from the apple crop would have been increased if more apples had been marketed locally and less shipped to New York.

Western New York: Newfane-Olcott Area

In the Newfane-Olcott community more than one-half of the apple crop has been sold outright and about one-fifth consigned to distant cities. Near-by cities and towns including Buffalo have used about one-quarter of the crop.

The better grades of Baldwin and R. I. Greening have usually returned the most when sold outright to dealers who in turn shipped the apples to distant cities. This occurred for Baldwin in three of the four years and for Greening each year.

In 1935, the year that the consigned shipments of Baldwin apples averaged highest, a large grower spread about 10,000 bushels on the ground to redden. Because of the high color thus acquired these Baldwins consigned to Boston the next spring sold unusually high.

As in the Champlain Valley, relatively more of the poorer grades of apples were used locally. When sold locally the poorer grades of R. I. Greening returned from 1932 to 1935, 3 cents more per bushel than when sold outright and 6 cents more than when consigned to distant cities. On the other hand, the growers received more for their better grades of Greenings when sold outright to dealers who shipped to distant cities. The largest returns to the growers are likely to occur when the poorer grades of Greenings are marketed locally and the better grades are shipped to distant cities.

Although only one-half as many McIntosh as Greenings were produced, still twice as many McIntosh as Greenings were sold locally. On an average the highest returns for McIntosh were received for those used in Buffalo and other nearby towns and cities. From 1932 to 1935 in these nearby cities the better grades returned 8 cents more per bushel and the poorer grades 7 cents more than was paid by the dealers who bought for distant shipments.

In general these results show that it is more profitable for the Newfane-Olcott growers to market more of their McIntosh locally and less to distant cities.

TABLE II. RETURNS TO GROWERS FOR APPLES SOLD AS INDICATED
Western N. Y., Newfane-Olcott Area

Variety, Year	Returns per Bushel for Apples Sold: Local Consumption	Outright	Consigned	Variety, Year	Returns per Bushel for Apples Sold: Local Consumption	Outright	Consigned
Baldwin	cents	cents	cents	McIntosh	cents	cents	cents
better grades				better grades			
1932	43	48	42	1932	72	75	66
1933	80	84	68	1933	108	100	61
1934	87	96	80	1934	104	100	106
1935	61	72	81	1935	69	45	62
Average	68	75	68	Average	88	80	74
poorer grades				poorer grades			
1932	31	26	23	1932	42	36	36
1933	43	50	47	1933	67	51	9
1934	67	54	75	1934	71	66	69
1935	45	37	58	1935	40	40	33
Average	46	42	51	Average	55	48	37
R.I. Greening				Wealthy			
better grades				better grades			
1932	29	39	32	1932	45	52	27
1933	73	80	79	1933	62	66	68
1934	71	82	76	1934	70	69	62
1935	56	63	45	1935	43	53	40
Average	57	66	58	Average	55	60	49
poorer grades				poorer grades			
1932	28	22	21	1932	28	31	12
1933	49	48	49	1933	40	43	39
1934	42	44	35	1934	44	53	22
1935	31	26	25	1935	43	37	22
Average	38	35	32	Average	39	41	24

From 1932 to 1935 the Newfane-Olcott growers shipped one-fourth of their Greenings to New York and one-tenth to Chicago. About 90 percent of the Greenings shipped to New York and 75 percent shipped to Chicago were of the better grades. For the better grades of Greenings, New York returned 5 cents more per bushel

than Chicago (Table III). The New York returns were higher than Chicago's in each of the four years.

TABLE III. RETURNS TO GROWERS FOR R.I. GREENINGS SHIPPED TO NEW YORK AND CHICAGO
Newfane-Olcott Area

Year	Returns per Bushel (better grades)	
	New York	Chicago
	cents	cents
1932	40	37
1933	86	81
1934	79	70
1935	52	49
Average	64	59

During this same period, 1932 to 1935, the Newfane-Olcott growers shipped 13 percent of their Baldwin apples to Cleveland and 3 percent to New York. About 76 percent of the Baldwins shipped to Cleveland were of the better grades. Practically all of the Baldwins shipped by the growers to New York City were of the better grades except in 1935. In the spring of 1936 the government bought from these growers several thousand bushels of second grade Baldwins which were shipped to New York. From 1932 to 1935 the better grades of Baldwins returned on the average 15 cents more per bushel in Cleveland than in New York. The experiences of the last four years would indicate that it was more profitable to ship R. I. Greenings to New York rather than to Chicago and Baldwins to Cleveland rather than to New York.

TABLE IV. RETURNS TO GROWERS FOR BALDWINS SHIPPED TO NEW YORK AND CLEVELAND
Newfane-Olcott Area

Year	Returns per Bushel (better grades)	
	New York	Cleveland
	cents	cents
1932	39	49
1933	66	91
1934	140	134
1935	71	102
Average	79	94

Hudson Valley

The apples grown in the Hudson Valley are all marketed by truck. Because of the nearness to New York City growers in the Hudson Valley receive more for their apples than do growers in Northern and Western New York.

In the Hudson Valley as in Northern and Western New York the returns were usually more for apples sold outright than for those consigned (Table V).

TABLE V. RETURNS FROM APPLES CONSIGNED AND SOLD OUTRIGHT
Hudson Valley; Columbia and Dutchess Counties 1930–32;[1] Ulster County, 1935[2]

Variety, Year	Returns per Bushel for Apples Sold Wholesale Outright	Consigned	Variety, Year	Returns per Bushel for Apples Sold Wholesale Outright	Consigned
McIntosh	cents	cents	Baldwin	cents	cents
better grades			better grades		
1930	1.44	1.43	1930	90	89
1931	1.35	1.39	1931	64	51
1932	1.10	.89	1932	64	52
1935	.94	.80	1935	74	58
Average	1.21	1.13	Average	73	62
poorer grades			poorer grades		
1930	81	70	1930	57	49
1931	85	71	1931	56	34
1932	46	45	1932	44	28
1935	35	27	1935	26	28
Average	62	53	Average	46	35

[1] Williamson, Paul S. *An Economic Study of Fruit Farming in the Hudson Valley, New York* 1930-32 —Thesis. Cornell University.
[2] Data obtained in cooperation with Farm Credit Administration, Washington, D.C.

The Ulster County growers interviewed, sold in 1935, 45 percent of their poorer and 25 percent of their better McIntosh apples to truckers. Truckers were designated as buyers whose only place of business was their truck in contrast with other buyers who had a store, storage, or some place of business other than the truck. The growers generally received the most for their McIntosh sold to these truckers. Thus the Hudson Valley farms are somewhat more profitable because of the competition of the trucker with the established firm.

Seven of the 60 Ulster County growers interviewed had their own cold storage plants. After deducting a charge for storage, the growers who owned their storages received, on an average, 16 cents more per bushel for their better grades of McIntosh than did the other growers who hired storage space. In the Hudson Valley, a grower with apples in his own storage is in a good bargaining position. He usually stores as picked, and packs when sold, thus giving the buyer a fresh pack, graded according to the buyer's requirements.

Such studies as these show how farmers market a crop and how the returns vary according to the methods used. It is important that these studies be carried on over a period of years.

NOTES

WHAT A TARIFF STUDY SHOULD REVEAL

EDITORIAL NOTE: Dr. W. C. Waite, Agricultural Experiment Station, St. Paul, Minnesota, is the associate editor in charge of the Notes. Manuscripts for this section of the JOURNAL should be addressed to him.

There may be a difference of opinion as to the purpose of many research undertakings in economics. At least rather often the purpose may imply a change in action requiring procedure, either private, public, or both. In the case of the tariff a study usually pertains to a federal change of law, involving greater freedom or friction in the matter of international exchange of goods.

For many years some of us on the Wisconsin Tariff Committee had had strong convictions to the effect that the majority of farmers had been the victims, not the beneficiaries, of the tariff policy. Proving, or disproving, this point might involve microscopic study, measuring to the millimeter, weighing to the milligram, and reporting values in mills. We are in no sense contemptuous of such fine calculations and measurements where they apply. We went over the matter with much care in deciding what method of measurement of tariff effectiveness to use, and decided that the differential method was better adapted to the purpose of the contemplated studies.

It may be noted that Professor Schultz seems thus far to rest his case for the equilibrium method on the assumption that demand and supply curves can be calculated for each and all countries, before and after, and that by so doing the effectiveness of the tariff may be revealed. We think very highly of this method where the circumstances seem favorable for its application. Had we had Professor Schultz's own testimonial concerning it[1] before us at the time of deciding what method to use, it would have given us added assurance that the plan we followed was for the purpose the best available.

Professor Schultz's statement that our "method," on which he wastes so much contempt, is based on the "notion that the increase in price subsequent to the imposition of a duty is equal to the full amount of the duty," is refuted throughout our whole series of bulletins. We believe that the tariff questions will be answered for years to come mainly in terms which can be understood by intelligent people who, for the most part, are not highly trained in calculus and statistics. The answers will not be mathematically exact, but as a rule this will be of minor importance. The farmers, for example, have been told, indeed have been made to believe, that the tariff on pork has resulted in higher prices for hogs in this country. We believe there is little truth in the belief, and undertook to make it understandable to a wide circle of readers. Some measurements need to be made with great nicety like the fitting of pistons to cylinders; the measurement of crowbars need not be so exact; yet each may serve its purpose equally well. Likewise respecting the tariff, the question of the desirability of admitting goods is primary. Should, for instance, the present high tariff on dyes prove ineffective in keeping foreign made dyes out, the demand for an added tariff would, most probably, be couched

[1] JOURNAL OF FARM ECONOMICS, XVII, p. 640. "The 'equilibrium method' is difficult to apply, since it calls for demand and supply curves which it is generally very difficult, if not entirely impossible, to obtain." See also by myself in Ibid., Vol. XIII, p. 547.

in terms of an increase of something like 25 or 50 per cent in the duty rates even though half that amount might be ample. Next would arise the question as to the increased cost of the dyes to the American consumer. The differential method might show no increase, or it might show a great increase. Whatever it showed would be an approximation, not a hair-line measurement. Anyone who knows the situation respecting the price of corn from year to year would not expect to measure the effect of a tariff with great accuracy except on most unusual occasions. The equilibrium method would prove futile, even absurd applied to corn, oats, or the great bulk of barley. Of all the important American farm products sugar (if it be important) is undoubtedly Professor Schultz's best choice for defending his method of tariff measurement, and in recent years it would be of doubtful accuracy even in this connection.

The tariff has been a powerful political force in American politics, in most presidential elections, the greatest. For over a hundred years the farmers have been swept into, and held within, the pro-tariff currents. They have been so controlled through logic, such as it was; through the intermingled statements of truths and untruths. There was little occasion, and no disposition to bring matters down to measurements requiring calculations in terms of mills and milligrams. We are still largely in the same era. We still need reconnaissance surveys; not measurements requiring a steel tape in the hands of skilful surveyors, with witnesses representing each side, and a third party holding in immediate proximity a recording thermometer, as is done in surveying land on lower Broadway.

We probably were not in an instance or two sufficiently circumspect in the estimates made of the cost of agricultural tariffs to the consumer. We felt that in attempting to stand up straight on the point we even leaned backward. Our primary purpose was to discover the benefit, or the lack of benefit, of agricultural tariffs to the farmer as a producer. The consumer cost was viewed as a by-product; sometimes important; more often not. The nature of the tariff as viewed by the farmer is shown in his demand, for instance, of a 100 per cent increase in the butter tariff between 1925 and 1930; of a demand almost as great for increased duties on corn. It seemed to be worth while to shed a little light, specifically focused, on items of this kind, and in not one of the major cases involving agricultural tariffs, with the possible exception of the sugar tariff, (if that be major) did it seem to us that minute measurements were either necessary or feasible. In the case of sugar the Philippine situation was such that a small fraction of a cent in added advantage was not to be belittled. Yet the chaotic state of the world sugar market was such as to defy accurate description, measurement or prediction. What is more, the reception which these studies have received, including many critical comments, would seem to indicate that they are not altogether bootless. For some time to come the farmers' interest in a tariff on their own products hinges upon views pertaining to the general effectiveness of a 42-cent wheat tariff, a 30-cent barley tariff, a 14-cent butter tariff, and during this period the repercussion of our actions on foreign prices will be of little importance in the controversy. What the various cases require are general truths squaring with logic and facts. Super-refinements may be possible in a few instances. For the most part they are not needed, and it has not yet been demonstrated that they are at all generally feasible.

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METHODS AND OBJECTIVES IN TYPE OF FARMING INVESTIGATIONS

It appears to be a fair statement that at the inception of type of farming studies, the approach was almost entirely from the farm management point of view. The emphasis was upon the adaptation of farm organization types to the natural factors of a more or less homogeneous area, and upon the economic forces effecting this adaptation. The description of the present modal or representative farm types, and the portrayal of recent trends in the changes of representative types, were used as the basis for prediction as to the successful kinds and sizes of farm organization of an area for the future. The type of farming areas upon which such analysis was based were generally of sufficient size, however, as to involve considerable diversity of types, without showing where within the area a concentration or intermingling of types might be located.

This approach must rest largely upon the premise that farm operating experience and competitive economic forces have determined the major limits of the economic agricultural uses of the area and the sizes and types of operating units that can carry out such uses effectively; and that the future adjustments in the agriculture of the area can and will be made through the selection of their individual alternatives by farm operators. This approach consequently does not concern itself with a critical appraisal of the present dominant farm types in relation to the major use alternatives of the agricultural resources of the area, the ability of these resources to sustain the present uses, or of the ability of the present numbers, sizes, and types of farm organizations to carry out other possible alternative uses of these resources. Since the present dominant types are taken as the best economic adaptation as developed by entreprenurial selection, and as the types through which future adaptations will be developed, there is little point in studying the exceptional, the "mutations" in farm types in the area, or in studying the usually considerable number of farms having a low income probability, and analyzing the farm organization, managerial, or resource use defects back of such low income probability. These latter presumably could and should adjust their type of organization and operations to the mould of some one of the dominant types of the area.

A modification of this strictly farm management approach to type of farming analysis might be first to see what techniques are available in applying farm management data for determining the economic use limits of the resources of areas, such areas being first delimited by the predominance of certain farm types. This procedure in the analysis might seek to define grades of land from the soil and land classification surveys, in terms of the yield capacity of different grades of land for various crops and livestock. To this would then be applied a budgetary analysis of the different possible types of family-sized farm organizations, using the longer-time price expectancy for the calculations of costs and income. This affords an approach to the measurement of the competitive strength of different types of farms and of the probability of the economic rank of the various major alternatives for the uses of the agricultural resources of the area. In this approach the classification of lands into grades, with such grades defined in terms of their yield capacities, becomes the connecting span between land utilization and farm management analysis.

For the prediction as to future adjustments, this analysis would then be related to a rather complete description of the prevailing farm types and of the grade of resource on which they are now operating. This would give a picture for the area of the extent to which the higher order of economic uses of the area's resources is now being realized by the prevailing major farm types.

There are difficulties to be reckoned with in this kind of approach. It would require a considerable body of localized crop yield experience data that could be correlated with soils data. It would require the delimitation of smaller and more homogeneous areas, particularly relative to the natural factors influencing farm types, than has been undertaken in the past. In areas of highly diversified farming, the association of crop yield experience data with soil types would require the development of productivity indices from the alternative crop relationships and rotations for the various farming systems to be tested by budgetary procedure.

The first of these two approaches infers that, with necessary farm management information, farm operators will make the economic adjustments through individual choice. The second approach implies the economy of group controls, legislative measures, and the operations of public and quasi public administrative agencies in facilitating adjustments which can be determined to be in the direction of economic and social efficiency. The development of a background for the local adaptation of adjustment measures to homogeneous areas and communities would appear to be within the scope of type of farming investigations where the necessary detailed data can be developed on the association between (1) the economic limits in the uses of grades of resources, (2) the farm types that fit such uses, and (3) the area pattern of present farm types and land uses.

The possibilities of this approach in type of farming studies have been idealized to a considerable degree in the above description. In undertaking to develop this approach in the Montana type of farming study it has been possible to develop an association between experimental and survey farm management data, and crop yields, to determine the approximate order of economic use for different grades of crop land, and the grade representing the margin of use for the production of crops.

From various sources, such as the AAA records, the records of credit agencies, forest and grazing district permits, irrigation districts, and other sources, it has been possible to develop, for most of the farms in the state, an analysis card for each farm showing: (1) the description and location of the farm, (2) the acreage of crop land and grazing land, (3) the acreage of cash crops and feed crops, (4) the crop yields, (5) kinds and numbers of livestock for the period, 1928 to 1935. This has made it possible to set up a classification of farm types based upon organization characteristics and the future income expectancy from the different farm enterprises. These farms are then mapped in location with symbols representing the different farm types, and from these maps the boundaries of subareas are delimited within the major type of farming areas. These major type areas were previously established through a consideration of the more generalized data such as the type data of the 1930 census, climatic and soils data, the pattern of major land uses from AAA records and other sources such as the crop and livestock distribution indicated by the census, and other customary procedures for determining the generalized

type of farming areas. The location of farm types was also related to the detail county maps of the soil survey land classification and the major land uses as mapped in local detail from AAA records, in establishing subarea boundaries.

In certain of the subareas where the type of farming rests on specialization, and the grade of land in terms of its yield represents one of the extremes of high or low capacity, it is possible for farm management analysis to determine what changes in type, size, and number of operating units might be made to improve the economic utilization of resources. In other of the subareas where the types represent diversification and where the grade of land is in the middle range or has considerable local variability, it becomes necessary to develop a considerable body of detailed information to foresee possible adjustments in the farm types that will realize a higher use of resources.

The device which has been developed has been to apply long-time price data to the long-time production record of the individual farm, to give a gross income expectancy for each operating unit. In mapping the location of farm types by symbols, the symbol is also used to indicate the range of gross income expectancy in which the farm falls. The class intervals which have been used for gross income are: (1) under $1,000, (2) $1,000 to $2,000 (3) over $2,000. For each of the subareas a frequency array is developed of the organization factors of all of the farms in each of these gross income class intervals, thus affording a basis for comparison of the characteristics of the better and poorer farms in a small and definitely located area. The organization factors for which such frequency arrays are made are: (1) total acreage in the farm, (2) acreage in cash crops, (3) crop yields, (4) acreage in feed crops per animal unit, (5) livestock units. An analysis of these frequency arrays generally indicates the factors of maladjustment behind the subareas where any considerable percentage of the operating units has a critically low income expectancy.

These key factors indicate major phases of organization which may or may not evidence weakness. If weakness is shown in any factor, it forms the basis for a closer analysis to determine the reasons for the weakness. Low wheat yields may indicate poor soils, precipitation, or other climatic hazard problems in soil blowing, improper tillage methods or various combinations of these and other factors. Through an understanding of the reasons for each major weakness an adequate groundwork is laid for determining sound adjustments.

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BOOK REVIEWS

Die Elastizität der Deutschen Getreide-Anbauflächen, by Carl Boehm. Special Issue No. 40 of the Institute of Business Research, Berlin. 1936.

The Institute of Business Research, Berlin, Germany, has added to its series of special issues an interesting study on the elasticity of the German grain acreage by Carl Boehm. The responses to changes in price of the acreage in winter wheat, winter rye, barley, and oats in Germany as a whole, in Prussia, several Prussian provinces, and in Mecklenburg from 1925 to 1934 were analyzed with the help of mathematical statistics. The main procedure followed in the study was, briefly, as follows: The average price index numbers of each of the grains investigated, except oats, for the whole of Germany for some time prior to seeding were divided by the price index numbers of major crops for the same period. The acreage in each grain was expressed in percent of its respective straight-line trend. From these data the coefficients of elasticity as well as parabolic supply curves were computed by the method of least squares. The supply curves and the deviations of actual from calculated acreages served for conclusions as to the farmers' response to price.

A similar but somewhat more refined calculation of estimated acreages was made by relating the deviations of the acreages from their straight line trends to the ratio of the price of the respective grains to the price of other grains. Only those price ratios which yielded significant coefficients of correlation were used for this purpose.

The coefficient of correlation between the deviations of the acreage in winter wheat from its trend and the relationships between the average prices of wheat and rye in the nine months preceding seeding—January to September—was found to be .811 for Germany as a whole. The same coefficient for the deviation of the acreage in winter rye and the rye-wheat price relationships was as high as .940. These findings strongly indicate that the price relation between wheat and rye has a very great effect on the variations of the acreage in these grains and may be accepted as a proof of the rather widely shared opinion that changes in the acreage of winter wheat and rye mainly represent shifts from one of these grains to another. It is true that the coefficient of correlation between the deviations of the winter wheat acreage from its trend and the wheat-oats price relationships was still higher than that for winter wheat acreage and wheat-rye price relationships; namely, .862 as against .811 for the latter. But the correlation between the deviations of the oats acreage from its trend and the oats-wheat price relationships proved to be so small that the author did not consider it proper to use the results obtained for any conclusions. Nor did the correlation between the acreage in oats and the price relations of this grain to rye or barley yield marked results. Data for barley did not produce as high coefficients as did data for wheat and rye.

The coefficients of elasticity of the acreage computed by the author are small. They are .28 for wheat, .16 for rye, .12 for barley, and .22 for oats. It is shown that the size of farms and the percentages of the crop sold off the farm affect the elasticity of acreage sensibly. The greater is the percentage of the crop sold the higher is the elasticity of the acreage. Large farms show a greater readiness to adjust their acreage to price changes than small farms. This readiness by far exceeds that which is accounted

for by the greater percentage of the crop sold by large farms, as compared with that sold by small farms. With the effect of farm size eliminated, barley probably would shift to second or third rank with regard to the elasticity of the acreage as against the last position it occupied now. In the opinion of the reviewer, rye undoubtedly would be the least elastic crop, if both the effect of farm size and that of the percentage of the crop sold were eliminated. This is caused by the particularly strong position rye holds in the rotation on most German farms.

Boehm follows the practice of many statisticians of making several computations and presenting only those of them which render the greatest coefficients or the best fit, without regard to the fact that other computations, although yielding smaller coefficients, may have greater economic significance. His preference for statistical as compared with economic findings is illustrated in his computations for oats. Here Boehm uses neither the price indexes of oats divided by the price indexes of major crops nor the price relationships of oats to other grains (the procedures analogous to those followed with regard to other grains) but the nominal prices of oats. The reason given is that the latter yield a high coefficient of correlation with the deviations of the acreage from its trend, while the former fail to do so. Now, in German conditions, changes in acreage of the four grains investigated represent almost exclusively shifts from one grain to another. If there is some effect of prices on acreage in oats, these prices must be the price-relationships of oats to some other grain rather than the nominal oats prices. The high coefficient between the latter and the oats acreage lack economic significance. The failure of the more revelant prices to produce high coefficients of correlations might lead one to try still more refined analysis or to drop the idea of constructing a formula for the farmer's response to price with regard to oats entirely rather than to use results of a computation which accidentally yields a high coefficient of correlation.

As stated, average prices of nine months before seeding are used for wheat and rye as those which yield the closest fit. The closest fit for barley was obtained by the use of average prices of seven months before seeding (September through March) and for oats of 15 months before seeding (January through March of next year). The difference in the number of months between barley and wheat and rye may be justified on economic grounds. The seven months, September through March, are in the aggregate even more significant than the nine months, January through September. But it is impossible to find an economic reason for the difference in the interval of time as between barley and oats. Again, a smaller coefficient might have had much more economic significance. The author, however, not only does not use the findings for prices of a more comparable period of time, but does not produce these findings, thus depriving the reader of the possibility of appraising the justification for failing to use them.

Most conclusions drawn by Boehm from his analysis seem to be somewhat too sweeping. A decade is a rather short period for an analysis of this kind. Moreover, so many disturbing events occurred during the period from 1925 to 1934 that it lacks the character of an even approximate uniformity. Hence, the straight line trends used by the author do not fit the data for some of the grains at all. Moreover, it is the impression of the reviewer that some conclusions are not justified by the data, as for instance the fit between the actual and the calculated acreage in oats is not only not good,

as Boehm considers it to be, but does not in the opinion of the reviewer permit any inferences. With respect to the findings for parts of the country rather than those for the whole of Germany, the using of price indexes for the whole country raises doubts.

The reviewer wishes he had been able to use Boehm's study in preparing his report on the German wheat situation (*Wheat Studies*, November, 1936). There are no significant differences in statements and conclusions, but the problem of farmers' response to price could get only insufficiently elaborate treatment in that general study.

N. JASNY

Washington, D.C.

Farm Records, by John A. Hopkins, Ph.D., Iowa State College, Ames, Iowa: Collegiate Press, Inc. 1936. Pp. xvii, 215. $3.50.

"The central purpose of this book is to develop practical applications of accounts and records in the management of the farm." The author does not describe or recommend any definite system of record keeping. Rather, he considers whatever types of records promise to be of assistance in the management and control of the farm business. Neither is the book a complete text in farm accounting. It assumes that the student is familiar with the elementary principles of accounting and discusses these principles only in order to apply them to farm records.

In general plan the book consists of five main parts. The order of their presentation is logical from the standpoint of teaching, and in general it coincides with the order in which a farmer encounters particular problems in the keeping and using of farm records.

Part I deals with the organization of the farm business at the beginning of the accounting period. Principal considerations include the preliminary farm budget, the setting up of production records, taking the farm inventory, and the analysis of the net worth statement. The suggested methods of analyzing the financial strength of the business are of particular interest since such analysis is often given inadequate treatment in farm accounting systems.

Part II gives a brief description of the common types of financial accounts and the information that can be obtained from each. The types of accounts discussed are double entry accounts, multiple column records, and single entry records.

Part III, dealing with the analysis and interpretation of farm records, is of primary importance, since the emphasis throughout the book is on the use of records, rather than on the keeping of the records themselves. Particular chapters deal with income statements and the interpretation of income, the current use of quarterly summaries, and analysis of the efficiency of various phases of the farm business. There is also included a chapter dealing with efficiency factor analysis and diminishing returns. This analysis presents relationships discovered by methods of curvilinear multiple correlation applied to Iowa farm records. For the student, this analysis suggests the interrelationships between the various parts of the farm business. To farm management workers, it also suggests a method of a more accurate analysis of such relationships.

Part IV discusses some special problems encountered in the keeping and using of farm records. Such problems include those relating to perennial

crops, personal accounts, partnership accounts, landlord's accounts, valuation of inventories, and depreciation.

Part V deals with the use of physical records and with enterprise analysis. Finally, there is a chapter discussing the use of accounting data in budgetary control. The emphasis on the close relationship between farm records and farm budgets or plans is an important part of the book.

A very brief reference is made to cooperative farm management associations in which farm records are so analyzed that the individual farmer checks his performance against that of other members of the association. In view of the author's statement regarding the value of this type of analysis, it would appear that it is given inadequate treatment.

The book is well written in a manner readily understood by students or by farmers. It includes numerous sample forms and illustrative tables and figures. Each chapter is preceded by questions setting forth the problems to be discussed, and each is followed by a number of review questions.

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Introduction to Social Research, by Emory S. Bogardus. Los Angeles: Suttonhouse. 1936. Pp. xi+237.

It is intended that the college student and "any intelligent person" shall find in this volume an understanding of scientific methods of investigation. Undergraduates meeting methodology problems for the first time should be stimulated by the facile presentation; graduate students will profit little.

The need for objective research in the social sciences is ably set forth. Cursory and superficial chapters on statistics were better omitted from the volume. A chapter on community survey methods and one on measuring opinions and attitudes are too brief and too fully devoted to espousing certain of the author's own techniques to open many new vistas. But the author has made a real contribution, for undergraduates, in his well-illustrated discussions of participant observation, life histories, and diaries. These methods have been poorly handled by other authors and little discussed in the journals. They should prove useful in the present day swing away from the fad of statistical methods which swept sociology some years past. There are good bibliographies for each chapter.

C. ARNOLD ANDERSON

Iowa State College

Diminishing Returns and Planned Economy, by George M. Peterson. New York: The Ronald Press. 1937. Pp. viii, 254. $3.00.

The volume has resulted from eleven years of experience in teaching, chiefly to graduate students in Agricultural Economics, and is intended as a text that may be used in both graduate and undergraduate instruction. The choice of a title is significant. The treatment of diminishing returns theory, very thorough and painstaking, occupies more than half of the book. The inclusion of the term "planned economy" in the title reflects the author's desire to relate a somewhat abstract theory to practical problems of public policy. The results of this attempt are, in the opinion of the reviewer, far from convincing. The treatment of diminishing returns will be reviewed in more detail than other parts of the book

since it is to this that teachers and students using the book are likely to devote most of their attention.

Diminishing returns is a term used to describe the concept of the quantity of product decreasing as the proportion in which the factors of production entering into the process departs from an optimum. It is possible to draw a generalized type curve to indicate the manner in which output varies as the proportions of two input factors vary in a systematic way. Certain relationships between inputs and outputs at various points along such a curve may be expressed. In this way a technique may be developed which is very useful in the analysis of economic problems. Peterson attempts to demonstrate that such a technique is the key to an understanding of those things with which economists concern themselves. In doing this he has presented the most thorough-going graphic analysis of generalized input-output relationships with two input factors that has yet appeared in a general treatise on economic theory and probably in any published form.

The author is very critical of the conventional analysis in which one factor is held constant while another is varied. Admitting that this approach has a limited usefulness he still does not consider it adequate for an understanding of the law of diminishing returns and hence of most economic theory. Therefore he uses an analysis in which both factors vary simultaneously, or perhaps more accurately stated, one in which a series of combinations is used in which the quantities of the two factors vary regularly from a relatively large number of units of X and none of Y to a relatively large number of units of Y and none of X. The chief point of difference is that the conventional analysis in combining 0, 1, 2, 3, etc. units of factor X with one unit of factor Y, measures the effects of those combinations in which the number of units of factor X is zero, equal to, or greater than the number of units of factor Y and neglects a whole range of possible combinations in which the number of units of factor Y is greater than of factor X. Thus it is maintained that only about half of the entire relationship is treated. This difference however may be more apparent than real.

In the familiar example of applying varying amounts of seed to a fixed area of land it is customary to use an acre of land and pecks of oats, barley, wheat or corn. In this example one acre of land is such a large unit as compared with one peck of barley that results in the form of output curves are quite similar to those which Peterson arrives at in his examples. If one peck of seed is so small an application as to result in no output there is no need for considering one peck of seed in combination with two or more acres of land. It is important to understand this relationship between the character of the units chosen and the series of combinations used. In the analysis of actual production problems it is important to test out only that range of combinations within which with varying price relationships the most profitable combination may be found. This range cannot be wider than that from the point of highest output per unit of X and that of highest output per unit of Y. In most fixed and varying factor analyses this range of proportions is covered.

The fixed and varying factor type of analysis has been used by Dr. John D. Black and others as a technique by which entrepreneurs may determine the best proportion in which to combine the factors of production. In this analysis land or fixed capital goods are treated as the fixed

factors and the returns to them are treated as rents rather than as costs. Hence it appears profitable to increase applications of the varying factor beyond the point of least cost per unit of output in terms of that factor. A highest profit combination is reached where the last or marginal unit of the variable factor adds to the previous product just enough to pay for itself. Another type of analysis has frequently been used in which all factors are considered as variable costs with the result that least cost in terms of all factors coincides with the highest profit combination. Students have frequently been confused in attempting to reconcile these two types of analysis. Such students are likely to receive considerable help from the discussion of this relationship in this book.

Peterson works out from the input-output relationships a method of determining the least cost combination with both factors varying and with any given ratio between prices per unit of the two input factors. The curve showing this relationship connects the low points of a series of cost curves for different price combinations or ratios.

The chapter on distribution is chiefly a demonstration of the extent to which marginal productivity analysis may be used to explain functional distribution. This analysis depends upon the determination of the effect of a small increment of one factor added to a given amount of another factor. The output of this marginal increment when multiplied by the number of units of the factor in which the increment occurs gives the total amount of the product imputed to that factor. This is the central part of both Peterson's analysis and that which he describes as more usual. It is impossible to read the effects of such marginal increments of one factor directly from curves which show only the effects of adding a unit of one factor while subtracting a unit of the other. The marginal relationship is derived from rates of change by solving simultaneous equations. In teaching students with the usual amount of mathematical equipment this is likely to be a disadvantage.

The discussion of wages is very brief, consisting chiefly of pointing out the discrepancy between returns to labor as a functional share and the incomes of workers as individuals. Rent is discussed at more length as a case of marginal productivity, and the return on physical units of capital goods as a related phenomenon. A time preference theory of interest is accepted in preference to a productivity theory. Profits do not exist for society as a whole accruing only to those who make better than average combinations of the factors of production and offsetting losses to those who make poorer than average combinations.

The usual explanation of demand curves in terms of marginal utility is reviewed critically. It is suggested that the diminishing returns analysis may be applied to utility, treating persons and goods as input factors and utilities as the product or output. The reviewer doubts that this contributes to our equipment for the analysis of demand.

Opportunity cost is described as the loss suffered by an entrepreneur by failure to make the best possible combination of the factors. When such a combination is made the opportunity cost is zero. This is certainly a different concept from that of H. J. Davenport and other exponents of opportunity cost doctrine, yet Peterson does not mention these differences. Comparative advantage and interregional competition are likewise discussed in a way which leaves some doubt as to what the author really meant.

One of the longer chapters in the book is on population. The optimum population concept is reviewed, and a goal of maintaining the present population is chosen as the most suitable objective in population planning. The selection of a goal for population planning cannot be defended on economic grounds alone. Doubtless many would choose other goals. However, it hardly seems that maintaining the population can be considered as an ultimate goal. Obviously something in the way of an average welfare criterion or perhaps a definite minimum of essentials for everyone is necessary. In selecting the goal that he did, Peterson evidently had something of this kind in mind and considered a declining population as not conducive to high incomes or a high level of welfare. No recognition is given to the problem of whether or not a goal of maintaining the present population size is equally desirable for all nations or other economic or political units.

The author constantly emphasizes the complexity of the interrelationships between economic factors as well as the difficulties in their measurement. He even points out that planning becomes increasingly more complicated as the universe becomes larger. In view of this apparent predisposition toward caution in arriving at conclusions concerning social planning measures which involve many considerations, the reader is likely to be startled by the bold pronouncements concerning current planning programs and policies. For example, a program of government purchase of submarginal land to retire it from agriculture is condemened on the basis of the simple argument that if there is too much land in agricultural use the poorest of it will yield a negative rent and hence the government should pay nothing for it. This neglects obvious considerations such as the possibilitity that even though the land in question yields no rent in its present agricultural use it may have some social value for forestry or recreation even though private enterprise has not devised a means of realizing the potential returns from such use.

The programs for refinancing farm mortgages and raising prices of farm products are condemned as inconsistent with a submarginal land purchase program and economically unsound. The possibility is suggested that they might be justified on the basis of political expediency. Most economists would also give some attention to the possible effects of widespread bankruptcy over large agricultural areas upon the functioning of our national economy.

The wide application which the writer ascribes to his theoretical analysis and the ease with which he passes from diminishing returns to planned economy is perhaps best illustrated or summarized by his statement (p. 197), that "Practically every proposal advanced during the Roosevelt Administration in the name of economic planning or of a planned economy can be condemned on the ground that it is contrary to the law of diminishing returns."

In the opinion of the reviewer this book will be found better adapted to graduate than to undergraduate teaching. Mastery by undergraduates of the somewhat complex graphic treatment of diminishing returns is likely to detain them in this phase of economic theory for a considerable period; probably too long in the opinion of most teachers. The discussion of distribution is sketchy and includes more criticism of classical theory than presentation of an alternative. Hence some previous introduction to the subject is needed. Advanced students and mature economists may

find it well worth while to follow through the diminishing returns analysis. They will likewise find the treatment of such subjects as capacity, efficiency, the character of economic interrelationships, the measurement of economic factors, and the effect of distribution of property rights upon personal incomes stimulating and refreshing.

R. H. ALLEN

Harvard University

The Ejido: Mexico's Way Out, by Eyler N. Simpson. Chapel Hill: University of North Carolina Press. 1937. Pp. xxi, 849. $5.00.

This book deals with the modern land tenure problem of Mexico in a thorough and comprehensive manner. It is a worthy sequel to McBride's *Land Systems of Mexico*. The author is no mere summer tourist who writes a book on the basis of two weeks in Mexico and two months in an American library. Doctor Simpson, the author, was Associate in Mexico for the Institute of Current World Affairs from 1927 to 1934, and John Simon Guggenheim Memorial Foundation representative there from 1929 to 1933. He has also taught in the University of Mexico.

The term *ejido*, it is explained, was originally used in Spain as a name for the uncultivated lands held collectively and located on the outskirts of agrarian communities. "In Mexico at the present time, the word is used to refer to all types of lands which have been restored or granted to agricultural communities under the land reform initiated in 1915." (Cover)

Land reform in Mexico faces many obstacles: physiographic, agricultural, economic, political, and social. Land resources, though extensive, are poorly adapted to successful commercial farming. The land and water resources of Mexico are " . . . characterized by extreme climatic and topographical contrasts." Good crop land is relatively scarce; and the poor crop land is more utilized than the good. "Mexican agricultural production can be described in two words—scarce and costly." And it is often said, "in Mexican Agriculture, 'the origin of economic poverty is in natural poverty'." P. 161.

In spite of these physiographic limitations, the author believes that the plight of Mexican agrciulture is to a large extent due to certain historical, political, and sociological factors. To quote the author himself:

"Mexico has more than enough land to support the present population, or an even larger population, at a standard of living far above the present subsistence level on which most of the people live and have their being."

"In sum, the agrarian and agricultural problems in Mexico would appear to be functions in the first instance not of the factors of the quantity or quality of the available physical resources, but rather of the uses to which these resources have been put. If agricultural production in Mexico is low, if the people are hungry and miserable, it is not because God, natural law, or any other abstraction has so ordained but rather: (a) because the ownership of the land has been concentrated in the hands of the privileged few and under a semi-feudal system either worked inefficiently or not at all; (b) because there has been almost a complete lack of agricultural credit; (c) because the population has been distributed with inadequate relation to agricultural resources; (d) because systems of communication, marketing, and transportation have been insufficient or nonexistent; and (e) because the techniques used in Mexican farming are, for the most part, of the most primitive type." Pp. 168–169.

The *ejido* program had its beginning in the Revolution of 1910; it was given legal status by the decree of January 6, 1915, by Article 27 of the 1917 Constitution, by the Agrarian Regulatory Law of April 10, 1922, and by many subsequent laws and regulations. The main objective of the program has been to redistribute agricultural lands which, for reasons well known to historians, had become concentrated into the hands of *hacendados* and to a smaller extent into the hands of *rancheros*. Some few villages also owned agricultural land. The principal method of redistributing agricultural land has been that of making free grants of land to agricultural villages—the land being "bought" by the government from large holdings surrounding the village. The owners have been paid with federal land bonds on the basis of assessed values of the land. Whether these bonds will ever be paid by the Mexican Government is considered problematical.

But payment for the land is perhaps the least of the many problems facing the *ejido* program. The big problems seem to be (1) finding enough good, tillable land to supply the needs of *ejidatarios* individually and collectively; (2) obtaining water resources; (3) educating the *ejidatario* in the ways of modern farm practice, farm management, group activity, health, and citizenship; (4) developing a system of credit suitable to the needs of the *ejido;* (5) developing sources of cash income to supplement subsistence farming; (6) overcoming the drawbacks of bureaucracy, "politics," and "red-tape." "Politics," the author quotes another writer, "is the cancer eating out the heart of the agrarian reform." Again: "Land without schools in Mexico is almost as useless as land without water or agricultural credit." P. 299. Also " . . . the problem of *ejido* credit, in its most fundamental aspects, is not a banking problem, it is a problem in education." P. 411.

In the face of these obstacles, how well has the *ejido* program succeeded? Let the author answer:

> "Considering that one of the avowed purposes of the agrarian reform is that of breaking up large estates, the fact that just about as many small and medium sized properties have been affected by *ejido* grants as have large properties and that some two-thirds of all large properties have never been touched at all raises some question as to just how successful the *ejido* program has been in destroying the *latifundia* system. And this question becomes even more insistent when one recalls that on the average the properties big and little, affected by *ejido* grants have lost only 14.2 percent of their total area and about a fifth of their crop land." P. 186.
>
> "It would appear, therefore, that even if the present laws are carried out to the very last period and comma, around 55,000 communities or more than ¾ of all the communities will not receive land; approximately one million individuals or some 27 percent of the total economically active population engaged in agriculture will have no land whatsoever; and over a third of the actual and potential crop land will still be in the hands of private land-owners (Figure 33). In a word, not only has the agrarian reform so far failed to achieve its goal of giving land to villages, but when, if, and as the goal envisaged in the present law is achieved, the land problem in Mexico in a very appreciable degree will still remain unsolved." P. 210.

Collective farming has not proved successful in the *ejido* program—as yet. The *agraristas*, the younger and more radical land reform group, still have hopes. The author himself believes that:

"(1) The goal of the agrarian reform in Mexico must be nothing less than the complete socialization of the nation's lands and waters." P. 510.
"(2) Eventually all agricultural real property in Mexico . . . must be held collectively and exploited cooperatively by agrarian communities." P. 512.
"(3) The responsibility for carrying out the *ejido* program must rest in the first instance with the federal government and the basis of operations must be agricultural regions rather than industrial agrarian communities." P. 518 and
"(4) The new *ejido* program presupposes national planning and effective centralized control of agriculture." P. 520.

In the above statements the author is admittedly going beyond conventional, "factual" social research. As he states in the preface, "this book . . . is hung on a thesis and hinged on an hypothesis." P. viii. He denies that this procedure has caused any appreciable bias in reporting and analyzing the facts. And, believe his statement or not, the reader will be impressed by the complete and careful manner in which Doctor Simpson has assembled and interpreted his materials. It is also of interest to note that the author has been notably fair and sympathetic with the Mexican viewpoint throughout the work.

In addition to being a valuable work on the Mexican program of land reform, this book will be of great value to land economists and resettlement administrators in the United States. Although there is little similarity in the land problems of the two countries, some of the basic human and economic issues are suprisingly alike.

C. Horace Hamilton

Texas A. & M. College.

Reciprocity, A National Policy for Foreign Trade, by William S. Culbertson. New York: McGraw-Hill Book Company. 1937. Pp. 298. $3.00.

The author of this volume on the foreign trade of the United States brings the conclusions of years of experience on the United States Tariff Commission into his discussion of international trade and the part which he believes that that United States should take in such trade. He is of the opinion that American foreign trade policy should be freed from partisan politics. Of central importance in such a policy is the tariff which "affects practically every phase of our economic life."

The trade agreements program of the present Administration is endorsed as sound in principle and effective in practice. There are minor weaknesses in the Trade Agreements Act of 1934 and these should be corrected by Congress. However, these agreements are leading the way toward restoration of American foreign trade. The history of trade agreements is traced, pointing out that they have been supported by both of the major political parties.

Barriers to international trade have developed in recent years. The author describes the barriers most frequently used during recent years.

The viewpoint of the author can best be described by quoting from his chapter on "Our Economic Frontiers." "A first requisite for real national prosperity, we should recall, is an increase in the volume of our foreign trade, both exports and imports." In support of this view the author deals at length with the principles underlying international trade and under the heading "Peekinese Economics" he analyzes the arguments of recent writers who have advocated "American Self-contained" and who have raised the question "Why Quit Our Own."

The student of international trade will find the volume interesting, informative and stimulating. The person who is not well versed in the theory of international trade will find the book interesting to read and easily understood. It will give all a better understanding of this vital American problem.

W. E. GRIMES

Kansas State College

The Social History of American Agriculture, by Joseph Schafer. New York: Macmillan Company. 1936. Pp. viii, 302. $2.50.

Students of American agriculture will find this little book distinctly useful. It is, as it were, "a low power view" of the whole story of agriculture in this country from Squanto and John Smith to Wallace, Roosevelt and planned farming. The immediate occasion for writing this book explains in part its character. Dr. Schafer was asked to give, some two years ago, at the London University, a series of eight lectures. The book contains the lectures.

Beginning with the basic subject of land the author shows the methods by which the European land systems were adapted to a continent of virtually free land, not all of which was easily accessible to the first few million settlers. In fact a scarcity of land, meaning by that a scarcity of land within reach of markets, and not requiring too much expenditure by way of subjugation, came to exist early in the nineteenth century and continued until the Homestead Act and the railroads made land, to the settler, superabundant.

Chapter I is typical of the eight chapters of the book. Not even a genius could tell adequately the story of "Land for Farmers," the title of the first chapter, within the space of 36 pages. That is to say adequately from the quantity standpoint. On the other hand, the chapter is rich in allusions, quotations, and citations, such as only a scholarly historian has at his command.

The title to Chapter V, "Professional Farming," seems less happily chosen than any of the others. One would infer that the members of the "profession" were, as a matter of course, in charge of the farms—perhaps trained at some institution to put farming on a higher plane. Instead, the author explains, very well indeed, the story of the application of science to agriculture. The farmers accepting, and using, the newly discovered applications of science, are the same farmers as before with, however, a new tool. They are hardly "professional," at least not in so narrow a sense as the term implies in connection with baseball. This seems to be true in spite of the author's rather good effort to explain, and justify, the use of the term "professional farming" under the sub-heading "Imitators of scientific farmers," p. 178.

The next chapter, the sixth, deals with "Social Trends in Rural Life," and brings to the reader's mind pointedly the title of the book itself. Probably most readers will be inclined to forget the title until reaching this point, and then wake up to the fact that the promise implied was an account, primarily, of the social aspects of American farming. All along, the chapter titles, the side-headings, the facts, figures and arguments pertain to the economic history of agriculture, which always involves some degree of its social aspects. The book might most properly have been called "Chapters on the Economic History of American Agriculture."

There will, of course, be differences of opinion on many matters pertaining to political issues. As an instance may be mentioned the claim that in electing Jefferson president in 1800, "The farmers of America had enacted what is widely recognized as a political revolution." This is undoubtedly literally true. At the same time the author admits that the vote was much influenced by the fear on the part of farmers that the Federalists were somewhat likely to restore monarchy. Thus the farmers to some extent were not voting against protective tariffs and the funding of the public debt so much as they were expressing their emotions against a fancied aristocracy. The farmers' convictions respecting protection during the first 25 or 30 years under the Constitution are elusive and vacillating. In fact the majority had not yet arrived at the stage of conviction. America was agricultural by an overwhelming majority in 1800, and the larger number of the farmers voted for Jefferson. That they did so in the belief that they were helping to formulate a national agricultural program is not so clear.

To sum it up, it should be said that the faults of the book are trifling in comparison with its merits. The weaving in of so many strands of general history which obviously belong in the warp and woof of the special history of agriculture will be both a warning and an inspiration to future writers within this field.

B. H. Hibbard

University of Wisconsin

Population Distribution in Colonial America, by Stella H. Sutherland. New York: Columbia University Press. 1936. Pp. xxxii+353. $4.00.

This book represents an attempt to procure census returns, or suitable substitutes for such returns, for the American Colonies showing the population distribution in the Revolutionary era. The investigation was carried on in state capitols, historical society archives, and public and university libraries. The author has arrived at conclusions for a date as near 1775 as possible; in any case not varying more than ten years. Data for each colony are given separately, and the geographical distributions are portrayed by means of dot maps.

Each section of the work contains an historical introduction with a description of the factors influencing settlement such as climate, topography, soil fertility, colonial policy, and opportunities for non-agricultural pursuits. An excellent bibliography of primary and secondary sources is attached.

This book fills an important need in the field, since it is more complete than any other available work.

Nathan L. Whetten

Connecticut State College

A Study of Fluid Milk Prices, by John M. Cassels. Cambridge: Harvard University Press. 1937. Pp. xxvii. 303. $4.00.

During recent years probably no farm product, regardless of its relative economic importance, has received as much public attention as has milk marketed for fluid consumption in cities.

Fluid milk areas have been centers of producer-dealer negotiations, scenes of farmer unrest, and farm strikes which reached a point in many markets where public health, welfare and safety were being endangered.

Pressure from individuals and groups involved in production, and distribution, and to a lesser extent from consumers, has stimulated inquiry by many public agencies including colleges and universities. Easily the most complete and thorough inquiry published on the subject of fluid milk prices is the *Study of Fluid Milk Prices* by John M. Cassels. While the title suggests a study of fluid milk only, the book covers a wide gamut involving a description and an analysis of forces determining prices, demand and supply not only of fluid milk but of the derivatives of milk as well.

The book may be said to consist of two parts, the first part comprising five chapters, primarily in theoretical terms, is devoted to a consideration of such basic factors as demand responses of milk consumers, production and disposal responses of farmers, and price making policies of producer cooperative marketing organizations. The balance of the treatise proper, containing eleven chapters, centers its attention on the analysis of market data covering an area referred to as the dairy and industrial area of the United States comprising about 17 of the northeastern states, but with emphasis on the large eastern markets. Following this is a 75 page appendix making available a mass of factual information including notes on important milk sheds and 52 tables concerned with various phases of milk production and utilization; prices paid by dealers, and by consumers for fluid milk; dealers' margins; railroad rates and receipts of milk as well as on a variety of other pertinent market data. Finally a dozen pages are devoted to the presentation of a complete bibliography of recent literature on the subject.

Despite the differences of opinion on the part of economists as to how directly it applies to the problem at hand, the portion of the book setting forth the theoretical considerations will outlive the rest of the book. These chapters developed mainly on the assumption of free competition, and with a typical neo-classical approach, evidence a clarity of reasoning and set forth a presentation in an orderly and logical manner. Under the assumptions made, the conclusions reached are not open to much, if any, question. In the opinion of the reviewer, the value of the analyses and the correctness of the conclusions turn rather on the fundamental question as to whether or not the assumptions made are so far removed from the situation existing in real life as to virtually divorce the theory from the practical issues involved. To the extent that the chapters on pure theory leave themselves unattached to those chapters involving a discussion of practical phases of marketing and price making forces, the theoretical discussion can scarcely be accepted as being a theory—in the sense of setting forth the general principles of a body of real (as contrasted with assumed) facts. Probably over-emphasis has been placed on free competition, free and unhampered movement of the product, and economic responses on the part of the producers and too little emphasis on institutional forces. The author of the book is clearly aware of the forces of the institutional factors and discusses them in later chapters. This, however, emphasizes the contrast between the theoretical analysis and the analysis of factual data later in the volume as is pointed out in the excerpts which follow:

"(1) The difference in the transportation rates will determine the distances from the market at which it will become more profitable to ship cream than milk.

> . . . The dividing line between the milk and cream zones in this case will be at that distance where the freight charges on milk are equal to 10/9 of the difference between their prices (freight on cream being equal to 1/9 of the difference). . . . For example, if the city price of milk were $3.00 and the price of cream $2.10 the dividing line would be 100 miles from the market, i.e., 10/9 of (300–210). At this distance the price payable to the farmers for either milk or cream would be $2.00 At any point less than 100 miles from the market the price would be higher than the price of cream and at any point farther from the market it would be lower." P. 21.

The reader cannot but be impressed with the delicate points of distinction characterizing the above statement.

The following excerpts are from a chapter concerned with the analysis of empirical data:

> "(2) In Column 7 are shown the differences between the computed competitive prices for milk of manufacturing quality and the actual prices paid for milk of the standard required for fluid consumption." (ten markets) "These differences are attributable in part to the higher sanitary standards that have to be met by producers supplying the fluid milk markets, in part by the success of the fluid milk marketing organizations in obtaining more favorable prices through effective collective bargaining, and in part by the policies of local protection adopted by state and municipal authorities. It will be observed that the differentials obtained above the value of milk of manufacturing quality varied from 36 cents per 100 pounds at Minneapolis to $1.31 at Hartford."[1] P. 173.

The differentials of the eight cities not named above varied from 45 cents to 95 cents. In the case of Hartford the differential amounted to over 50 percent of the computed milk price and for the average of the ten cities to nearly 30 percent of this price.

The amount of these differentials must be explained by forces other than those considered under the pure theoretical discussion. The fact must be mentioned, however, that the method of analysis followed does permit of obtaining, (in the form of a residual), at least a rough measure of the importance of the institutional factors, the most important of which is the effect of the bargaining power of producers' associations. This is indeed the heart of the analysis but the discussion is presented in such a way that the point may easily be missed by the lay reader.

One is impressed by the author's caution in qualifying statements. In fact, some statements seem to be qualified to the extent that the qualifications virtually explain away or contradict the original statement. To illustrate:

> "The theoretical supply price is strictly defined as that price the *expectation* of which would call forth a given supply of the particular good in question. . . . The price prevailing at the time when the decisions are made can have nothing to do directly with the returns obtained when the production program is finally worked out, and therefore it cannot, strictly speaking, be the price which motivates production. It does in fact, however, have a considerable influence on the farmers' decisions, partly because many of them tend to react to it almost unconsciously, partly because it is naturally taken as an indication of what the future price is

[1] "It should be pointed out that the excess of Class I prices above the competitive value of manufacturing milk would be still greater, e.g., for Hartford, $1.74."

likely to be, and partly because it affects the financial ability of the farmers to buy more cows or more feed." P. 16.

"The fact that producers do react in this way to the prices prevailing when their production plans are being made has a tendency to develop self-perpetuating fluctuations in the production of particular agricultural products." P. 17.

Some readers will be disappointed in the absence of treatments concerning the effect on prices if the distribution of milk were operated as a monopoly under public utility control. Considerable stress was placed upon the fact that the demand for fluid milk is relatively inelastic, but analysis involving only short time periods was undertaken. On the basis presented, proof of this inelasticity is reasonably conclusive, although the information used was for the most part from sources previously published. There may be, however, a real question as to whether or not the same degree of inelasticity would prevail if a sufficiently long period (several months or even a few years) were considered so that the full influence of price changes will make themselves felt.

Despite certain shortcomings of the book, Dr. Cassels is to be congratulated on having presented a scholarly and critical analysis of the intricacies involved in an explanation of fluid milk prices.

W. P. Mortenson

University of Wisconsin

The Decline and Rise of the Consumer, by Horace M. Kallen. New York: D. Appleton-Century Company. 1936. Pp. xx, 484. $2.75.

This book emphasizes the primacy of the consumer and the belief of the author that consumer cooperation is much more important and more likely to succeed than producer cooperation. "We are consumers by nature and producers by necessity. We are born consumers and remain consumers all our lives. We are not born producers." P. ix.

Mr. Kallen quotes from Adam Smith to prove that this is not a new doctrine. "Consumption," according to Smith, "is the sole end and purpose of all production: . . . the interest of the producer ought to be attended to only so far as it may be necessary for promoting that of the consumer."

Since the days of Smith more concern has been shown for the "processes and forms of supplying, than with the nature and action of demands. Consumption was taken for granted."

Unfortunately the author in emphasizing the importance of the consumer attempts to make a case against producer cooperation. He makes strong statements but presents little evidence. For example, in relating some of the experiences of the Rochdale Pioneers he states, "But the tale of the corn mill was from the first, the typical tale of producers' cooperation: drunken or lying or treacherous or incompetent managers, inferior grains, bad flour, bad blood among the members, bad goods at the store, disgruntlement at the consumer's table."

"The fatal defect of producers' societies," according to Kallen, "lies in their nature, not their method and intent. Producers societies are necessarily self-limiting and exclusive. They are necessarily associations of minorities standing in a competitive relation to each and to the majority."

The logic of the preceding statement does not coincide with well known facts. Probably the most successful cooperative movement in the United

States has been the cooperative elevator movement. This movement succeeded because the farmers were able to perform a necessary service for themselves at lower cost than it was being performed by other existing agencies. They secured a higher price for grain by reducing the "spread" between the price paid to the producer and the price for which the grain sold at the terminal market.

The success of cooperative creameries, cow testing associations, breeding associations, fruit and vegetable marketing organizations, and various other producer owned and managed cooperatives would seem to offer ample evidence that cooperative producers' organizations do not necessarily contain a fatal defect. Certainly, in the United States and in Denmark producer cooperation is of greater importance than consumer cooperation.

Unfortunately the book contains many inaccurate statements. For example, the Farm Bureau is credited with assisting in securing the adoption of the Clayton Amendment to the Sherman Anti-Trust in 1914. P. 225. County Farm Bureaus were very few in number until some months after the enactment of the Smith-Lever Act in 1914. The first state federation of county farm bureaus was not organized until 1917 and the National Farm Bureau was not organized until 1919. It is, therefore, doubtful if the few County Farm Bureaus in existence in 1914 had any material influence in the enactment of the Clayton Act.

It is stated positively that "In 1889, the farmers at Rockwell, Iowa, established the first cooperative grain elevator." P. 223. The elevator company at Rockwell gained distinction not because it was the first cooperative company, which it was not, but because it was the first company to adopt a "penalty clause" or "maintenance clause,' which enabled it to meet the unfair competitive practices sometimes indulged in by the "line" companies.

The statement, "In 1935, machines working at capacity can produce at least three times what they had been producing at the height of prosperity in 1929" p. 404 gives an incorrect impression. Production in 1929 was only about 19 percent below practical capacity. Certainly no one would claim that the improvement in machines in the past eight years would warrant the statement made. If the author is thinking of machines working continuously 24 hours a day and 365 days in a year, his statement may be correct. Most industries do not operate continuously day and night so what might be accomplished by continouus operation has no bearing on the problem.

It is difficult for a person who spent his boyhood on a midwestern farm farm and who has a wide acquaintance among farmers to believe that the tasks of the farmers "go with practically an animal standard of living and culturally sub-human mentality." P. 431. Such a statement does not indicate a knowledge of midwestern agriculture.

Census statistics do not bear out the statement, "The Agricultural laborer is a recent and new vocational category in the national economy." P. 720.

Evidence is also lacking that during the twenties "the rich owners of the great industrialized farms benefited" p. 267 (by the conditions of the period). Actually most of the large farm operators were in little better condition relatively than the smaller farmer with whose condition Mr. Kallen sympathizes.

"The Decline and Rise of the Consumer" will be appreciated more highly by readers who have time to sit and philosophize than by busy men and women who desire a direct approach to a definite objective. The author writes about many things and part of the things in which he is apparently most deeply interested have little direct connection with his major thesis. An example of this is his mention of the constitution. "Undoubtedly as so many historical authorities have so many times proved, the Constitution of the United States was written in skullduggery and enacted in avarice." P. 209. The statement leaves no doubt concerning the opinion held by Mr. Kallen. The readers who know something of American history will doubtless wonder, however, why no supporting evidence is cited since most historical writers who are widely known as authorities hold a very different point of view. The thoughtful reader will also ponder the following statement made in discussing the "Granger laws." "The Court, it need not be stressed, continued to interpret rules to preserve freedom and equality and security in such a way as to give a free hand to those who employed them with precisely the opposite effect." P. 219. The well-known facts are that Granger legislation regulating railways and other public utilities was upheld by the state courts and the United States Supreme Court. Undoubtedly the Court will continue to protect any citizen of the country from being imposed upon by any other citizen or by any legislative body in a way not permitted by the Constitution long after the book under review has ceased to be classed as a recent publication.

H. C. Filley

University of Nebraska

Sod-House Days, Letters from a Kansas Homesteader, 1877–78, by Howard Ruede. New York: Columbia University Press. Pp. 260. $2.75.

This book presents an intimate and detailed account of the activities, the hardships, and the rewards of pioneering on the Great Plains. Howard Ruede, who at the age of 23, left Bethlehem, Pennsylvania to become a Kansas homesteader was author of the letters which were compiled to form this volume. Ruede's letters are not pioneer reminiscences written at a distant date which would lend enchantment and spur the writer's imagination, but bear the photographic reality that one would expect of letters chronicled at the end of the day's hard work. They were intended to present to his relatives in the East a careful and graphic picture of his activities as a homesteader in order that they might understand exactly what he was doing and judge the advisability of joining him.

The author went to Kansas in 1877 and settled near Kill Creek, about 15 miles southwest of Osborne in Osborne County. This section had passed the stage of buffalo and Indian fighting and had settled down to the undramatic task of breaking the soil and earning a living. The writer makes no attempt to romanticize about the West. One feels he is refuting what he believes to be a common misconception when he writes his family, "I can't see anything heroic in coming out here to do farm work."

Ruede indicates how it was likely that many easterners were misled by glowing descriptions of the "milk and honey" West. The letters he was sending home were sometimes printed, and his neighbors did not approve of their realism. Ruede finally requested that his family discontinue publishing them. The settlers, he explained, were agreeable that he write

about the "ups," but not the "downs" of pioneer life. A hint as to a possible motive for the booster spirit was the fact that many homesteaders had no funds, no farming experience, nor even the intention of permanently farming the land, but were primarily interested in reselling at a profit after incoming settlers had forced up land values.

The life of the frontier era is pictured as being monotonous, dreary, and uninteresting when measured against present day standards. Yet, boredom is not perceptible in Ruede's writings. He reveals how man can adapt himself to his environment, compensating an existence of drab simplicity with an increased capacity for enjoyment of the commonplace. There was eager anticipation and satisfaction in locating the claim, striking well water, building a sod hut, and later a stone hut which was planned to fit the old ridgepole. There was careful scheming to save enough money for a cook stove, a coveted team of horses, and other common necessities. These were real triumphs. They protected him, lightened his burden, and ministered his physical wants. The youth of today could find no more direct satisfaction from obtaining a sport model automobile.

Sod-House Days presents the story of people of an era who would walk 10 miles to read a newspaper, and who would walk 15 miles to and from work for a wage of only $1.25. They lived and worked under great hardships. They had few mechanical contrivances and often dug their wells with broken handled picks, cut grain with cradles, and worked their farms with dull tools. The food was poor and living conditions almost intolerable. The tiny dugouts were overcrowded and it was sometimes necessary to sleep three in a bed. The itemized cost of lumber, hinges, nails, and other materials for a sod house was $10.05. Cash outlay was only $4.05 and $6.00 was paid for in work. Ruede gives a further sidelight on the cost of living: "This is the way to find out for how little a man can live. About ½ lb. of ham, 5¢; 1 oz. beans, ⅜¢; total 5⅜¢ for a meal."

Yet there was something exhilarating and toughening about direct contact with nature. "I can sleep anywhere now," Ruede wrote. Even a one course meal of mush seems delicious when described by a hard working, hungry frontiersman. Three months after his arrival, he wrote, "Today for the first time since I am in Kansas I took a shave."

It is interesting to observe how the frontier religion supplied a chief diversion from the monotony of endless toil. People walked miles to hear the Dunkard, Mennonite or other preachers. The pioneers of all sects met in various homes to listen to the sermons after which a festive dinner was served.

We cannot gather from the 23-year-old homesteader that the frontier was a hotbed of flaming youth. The closest he comes to mentioning his social exploits is: "The women folks got me on the subject of baptism."

The degree to which the country has recently been aroused to a consciousness of the problem of conservation of our top soil makes Ruede's comments of 1878 bearing on this subject of especial interest: "Out on the prairie you can scratch a hole two inches deep and the ground will stay in any shape you press it into, but when it gets dry it will blow away." And later he writes, "The man who sold that claim to the Glichers told them there was no more good land up here; that it was all sand hills and shifted with every wind." Again, he writes, "And sand! The corn fields around the 'city' are fairly covered with it."

Although not a brilliant writer, Ruede does display unusually accurate

powers of observation. Sod-House Days is not a book that can claim wide range reader appeal, yet, it will be read with great interest and profit by those who are interested in a more complete and accurate understanding of the American frontier.

DALE D. CLARK

Agricultural Adjustment Administration

Institut International d'Agriculture. Aperçu des bibliographies courantes concernant l'agriculture et les sciences connexes. Rome. 1937. Pp. 84.

Although the publication reviewed here might be expected as a matter of course from the International Institute of Agriculture, as the oldest international institution of an official character, agricultural research workers will nevertheless greet with satisfaction this first attempt of a compilation of current bibliographies on agricultural and allied subjects.

Agricultures owes the Director of the Institute's Library, Dr. v. Frauendorfer, considerably already for his ceaseless efforts along the line of agricultural bibliography in all its aspects. This compilation was also made under his guidance by the American Victor A. Schaefer, who in turn was aided by several members of the International Committee of Agricultural Librarians.

The most obvious importance of this secondary bibliography lies in the fact that it furnishes to agricultural investigators a convenient view of the most important title and abstract lists in their fields. It is perhaps still more important from another angle, which is that the variety of agricultural bibliographies as to number, form and scope, makes obvious the almost crying necessity for planned action in this field.

The following statistical derivation may serve as a contribution to the inventory of students of civilization like Sombart or Ortega y Gasset: of the 210 bibliographies listed only 31 began before 1900, 29 between 1901 and 1914, 8 between 1915 and 1918, 80 between 1919 and 1929, and 62 since 1930, and 22 since 1934.

It is perhaps superfluous to emphasize that the progressive specialization of scientific work is clearly reflected in these bibliographies.

It is of some importance to note that among the 52 German titles listed, 35 had been designated by the compiler as "decidedly international," while for instance, among the 23 American titles only 5 have been designated similarly, 9 among the 24 French, 8 among the 23 English. This fact may serve to indicate that the German bibliographer may be expected to play an important part when effective international cooperation becomes a reality. Moreover, if international undertakings of this sort are expected to rest on principles of fairness and democracy, the German language will have to be accorded its proper place.

It is, of course, unavoidable that a first attempt should have certain more or less grave shortcomings.

Perhaps the most important of these in the present case lies in the arrangement of the main part of the compilation. One might have expected that the change in the policies of the International Institute, brought about only two years ago, mainly at the instigation of the American delegation, would have influenced the compilers to arrange the titles in this list according to subject. "The institute was to serve as a lens, which would focus and reflect the facts gathered from all parts of the world in such a manner as would enable every farmer to see in these facts the basis of intelligent action." (The International problems of agriculture, p. 3, Rome, Institute, 1935.)

The lens mentioned in the previous paragraph has obviously been thought of as being of the convex rather than of the concave variety. The organization between the book covers can be carried still much further through logical arrangement according to subjects.

The subject index on pages 77–80 is absolutely inadequate. One only has to point out among other things the large subject "agriculture" or the synonyms "genetics" and "heredity." In a compilation arranged according to subject primarily either subject or title index would probably be unnecessary.

Finally, it may be said that the completeness of this work leaves much to be desired. Important omissions are, for instance, the Bibliographia genetica and the Concilium bibliographicum. Lesser omissions but equal in importance to or more important than certain titles listed are, for instance, the following: Internationaler Jahresbericht der Bibliographie, Journal of Heredity, Zeitschrift fuer induktive Abstammungs- und Vererbungslehre, etc. One also misses certain Japanese titles or titles from other countries and in other languages which are, no doubt, in existence, but which perhaps are not available even in the best agricultural library in the world.

ICKO IBEN

Oklahoma Agricultural College

Government Statistics: A Report of the Committee on Government Statistics and Information Services. Bulletin No. 26 of the Social Science Research Council. New York. 1937.

This report outlines briefly the work of the committee which was set up in the summer of 1933 as a joint undertaking by the American Statistical Association and the Social Science Research Council. The committee consisted of the following members who served during a part or all of the period covered by its activities: Edmund E. Day, of the Rockefeller Foundation; Frederick C. Mills, Columbia University; Meredith B. Givens, Social Science Research Council; Donald R. Belcher, American Telephone and Telegraph Company; Murray R. Benedict, University of California; John D. Black, Harvard University; William J. Carson, University of Pennsylvania; Robert E. Chaddock, Columbia University; Ewan Clague, Community Council of Philadelphia; Morris A. Copeland, University of Michigan; William L. Crum, Harvard University; J. Frederic Dewhurst, Twentieth Century Fund; Stuart A. Rice, University of Pennsylvania; Willard L. Thorp, Amherst College; Bryce M. Stewart, Industrial Relations Counselors, Inc., New York; Samuel A. Stouffer, University of Wisconsin; and Ralph J. Watkins, University of Pittsburgh.

The work of the committee and its staff extended in the main from April, 1933 to the end of 1935. It was a unique and in many respects an interesting experiment in the coordination and improvement of statistical information supplied by the various governmental agencies. In the early part of 1933 the inauguration of a drastic economy program in the Federal Government occurring simultaneously with an immense development of new agencies gave rise to fears on the part of many statisticians that important continuing series of basic data would be interrupted or discontinued entirely, while new statistical undertakings of more immediate concern to the newly established agencies might be of such a nature as to damage seriously the responses of questionees in connection with the older series.

As result of this situation, the American Statistical Association and the Social Science Research Council established this joint committee with funds adequate to carry on a considerable body of work with a resident staff made up of specialists called from various parts of the country. This group of workers found its services almost immediately in demand by administrative officers in the government. As early as June, 1933 the secretaries of Commerce, Agriculture, Labor, and Interior invited the close cooperation of the committee and its staff in working out the many and diverse problems of coordination and improvement in the statistical services falling under their jurisdiction. For a period of some eighteen months this work was carried along with a staff of varying size, which, however, included in all some fifty-seven persons who served at one time or another. One of its most important aspects was the aid given in establishing the work of the Central Statistical Board, an official agency which in considerable measure grew out of this initial undertaking. The development of this Board has been characterized as the most important statistical event of the Roosevelt administration. Possibly this is an extreme statement. It is clear, however, that the possibilities of such a board for improving the statistical work of the government warrant a continuing and friendly interest in its welfare on the part of all users of data collected and tabulated by the federal agencies.

During the course of the committee's work, dozens of memoranda dealing with particular statistical problems were cleared and passed on to various administrative officials in the government, usually as result of requests for such advisory recommendations. Later, somewhat in post-mortem fashion, an interesting by-product has been drawn from these activities and presented as a major part of the committee's final report. This is an attempt to state in brief form a body of principles which might govern policy in coordinating and improving federal statistical activities. It might be argued that such a framework should have been developed in the early stages of the committee's work. It is doubtful, however, that this would have been possible. At any rate, it was not done. At the close of the period of active work by the committee, however, this attempt was made to summarize such principles as seemed to have emerged and to have governed more or less unconsciously the recommendations presented by the committee. As they stand, they have no official significance except as their logic may lead them to be accepted and applied in the work of such agencies as the Central Statistical Board and in the evolution of relationships between the various units of the government.

The report consists in the main of three parts. The first of these is the summary of general recommendations or principles previously mentioned. The second is a very brief synopsis of conclusions with respect to numerous problems dealt with by various members of the committee's staff. The third section gives a brief report of the makeup of the technical staff of the committee. Appendices following give a brief summarization of the scope of federal statistics, of central statistical organizations prior to 1933, and a selected list of publications and principal memoranda developed by the committee during its period of activity. The last mentioned appendix will be of particular interest to statisticians in indicating phases on which work has been done, since many of these have not been published and probably will not be made generally available. Record of the work covered is, however, maintained in the files of the Central Statistical Board.

Referring briefly to the general principles which the committee sought to crystallize, a few comments may serve to indicate the feeling of the group with respect to the organization of statistical work in the Federal Government. The committee did not favor extreme centralization. It said instead: "Division of labor and decentralization of authority among the various statistical agencies should be maintained if the statistical and informational services of the Federal Government are to be responsive to the needs of administration and research." This runs counter to an earlier recommendation presented in the Bureau of Efficiency's "Report on the Statistical Work of the United States Government" which was published in 1922. That report recommended a rather highly centralized statistical service built up under a bureau of federal statistics.

A second and obvious conclusion is that if statistical work is to be decentralized, there is a virtual necessity for some adequate continuing activity in coordinating the work of many uncentralized agencies.

The committee's recommendations tended to favor the development in each major subject matter field of some one key agency which should be concerned with assembling data with respect to all aspects of its field. Certain familiar examples of this type of procedure are to be seen in the work of the Bureau of Agricultural Economics and of the Research Division of the Federal Reserve Board.

Specific but not detailed proposals were made with respect to the development of consumer services, the feeling being expressed that these functions should be brought together in a separate office which would serve as a focal organization for coordinating and interpreting statistical and informational services relating to the consumer.

A number of recommendations also were made with respect to problems of personnel in the federal statistical agencies. Among other things, recommendation was made as follows: "The Civil Service Commission and the Central Statistical Board should jointly explore the possibilities of (a) improving techniques in the examination of applicants for positions of a statistical nature; (b) revising the present system of personnel records and efficiency ratings to permit more flexible and selective promotion policies; (c) instituting an earlier retirement age both for administrative and professional personnel; and (d) revising the Civil Service classifications to provide for transfer to Professional grades of many technical positions now classified as Clerical, Administrative, and Fiscal."

Recommendations also were made for the establishment in the principal fields of statistics of systems of training or apprenticeship for the purpose of developing younger personnel and thereby facilitating the transfer and replacement of experienced men without jeopardy to the service. The committee's report expresses some little question with respect to the present systems of rating within the governmental agencies and policies with respect to promotion in the government service, particularly the tendency to emphasize administrative responsibilities as a basis for promotion rather than professional competence in the statistical fields.

The report as a whole, while almost in outline form, will be found to contain a good deal in the way of implications and certain factual information which will be of interest to most users of statistical information especially those particularly concerned with primary data.

M. R. Benedict

University of California

NEWS ITEMS

EDITORIAL NOTE: Mr. S. W. Mendum, Burea of Agricultural Economics, Washington, D.C., and Dr. F. F. Lininger, Agricultural Experiment Station, State College, Pennsylvania, are the associate editors in charge of news items. Material for this section of the JOURNAL should be addressed to them.

Notes on Western Farm Economics Association Meeting

The annual meeting of the Western Farm Economics Association was held at Reno, Nevada, June 24, 25, 26. The morning session on June 24 was held on the University of Nevada campus. After the Presidential address by George M. Peterson, the meeting was devoted to a discussion of technological and scientific developments not yet common knowledge, by states. The afternoon session was devoted to a discussion of Agricultural Policy. The main paper of this discussion was presented by Dr. Joseph S. Davis, Director of Food Research Institute, Stanford University. At the evening session the subject for general discussion was Agricultural Income. The main paper was presented by Dr. O. C. Stine, Chief of Division of Statistical and Historical Research, Bureau of Agricultural Economics.

On the second day, June 25, the group made a trip to Virginia City over Geiger grade and listened to a short talk on the Comstock Mining Region by William Smythe, Mackay School of Mines. The group traveled by auto caravan for Lake Tahoe via Carson City and arrived at Emerald Bay Lodge for one o'clock lunch. The afternoon session at the Lodge was devoted to a discussion of Farm Labor, with the main paper presented by R. L. Adams, Professor of Farm Management, University of California. During the early part of the evening, the group had dinner at the Lodge and listened to Mark Twain stories by S. B. Doten, Director of the Nevada Agricultural Experiment Station. The group returned to Reno by moonlight. The morning session on Saturday was devoted to a discussion of Small Farms, the main paper being presented by Dr. E. G. Peterson, President of Utah State Agricultural College. This general discussion was preceded by a brief discussion of "Inflation as it Threatens to Affect Agriculture," led by J. M. Tinley, University of California. The afternoon session was divided into two round table discussions, one on "Teaching and Research Programs in Agricultural Economics in the Eleven Western States," led by R. R. Renne, Montana State College, the other on "Range Livestock Research," led by C. E. Favre, Senior Range Examiner, Forest Service.

Approximately 60 members, representing nine of the eleven western states attended the meetings, together with several representatives of federal agencies including Forest Service, Soil Conservation Service, Agricultural Adjustment Administration, Resettlement Administration, and others. In its business meeting, the Association decided to hold the next annual meeting at Bozeman, Montana. The following officers were elected —Dr. E. F. Dummeier, Washington State College, President; Dr. E. D. Tetreau, University of Arizona, Vice-President; Dr. R. R. Renne, Montana State College, Secretary-Treasurer. The papers presented at the meeting will be bound and copies given to all paid up members. Annual membership in the Association is $1.00. Others may purchase copies of the proceedings at $2.00 from the Secretary-Treasurer.

In connection with the new Graduate School of Public Administration of Harvard University, two research seminars have been organized for the 1937–38 year in which agricultural economists will be interested. One of these deals with the general subject of land-use planning and control, and is under the leadership of Director Ward Shepard of the Harvard Forest, Professor John D. Black of the Department of Economics, and Professor Carl J. Friedrich of the Department of Government. Other faculty participants will be Professor A. C. Comey of the Harvard School of Regional Planning, Professor A. P. Usher, professor of Economic History in the Department of Economics, Professor Derwent Whittlesey of the Department of Geography, and Mr. Thomas H. Eliot of the Department of Government. Dr. R. H. Allen is acting as secretary of this seminar. Participation in the seminar will be limited to a small group of Littauer fellows, advanced graduate students, and consultants invited in from the public service for periods of varying length. The other seminar deals with the subject of public price policy and control, and is organized on the same general lines as the one on land policy and control. The leaders are Professors John D. Black, John M. Cassels, and Edward Mason, of the Department of Economics, Professors Tosdal and Stratton of the Harvard Graduate School of Business Administration, Professor J. A. McLaughlin of the Harvard Law School, Professor Arthur N. Holcombe of the Department of Government. In the course of the year this seminar will devote several weeks to intensive study of milk price policy, and another period to control programs of the AAA.

Coordination of all land use planning in the United States Department of Agriculture has been provided for by the designation of a Liason Board to advise with the coordinator on all matters of basic land use policy. Mr. Milton S. Eisenhower was designated coordinator, and E. H. Wiecking, assistant coordinator, the other members being Dr. A. G. Black, Earle Clapp, Dr. F. F. Elliott, Dr. Charles Kellogg, D. S. Myer, Milo R. Perkins, J. C. Salyer, L. S. Tuttle, and Dr. C. W. Warburton.

Development of a program of land conservation, land utilization, and retirement of submarginal land was assigned to the Bureau of Agricultural Economics, effective September 1. Dr. L. C. Gray, who was Assistant Administrator of Resettlement Administration in charge of land utilization, was placed in charge of this work with the rank of Assistant Chief of the Bureau. The personnel and facilities of Resettlement Administration engaged in such work were transferred to the Bureau. Responsibility for administration of tenant loans and rehabilitation loans to farmers under the Bankhead-Jones Farm Tenant Act was assigned to Farm Security Administration, with Dr. Will W. Alexander as Administrator, which will carry on the resettlement and construction projects of Resettlement Administration rapidly nearing completion.

Recent transfers of staff members of the Division of Crop and Livestock Estimates, Bureau of Agricultural Economics include the following: A. C. Brittain, from Washington, D.C. to Columbia, Mo.; Grant D. Clark, from Austin, Texas, to Lansing, Mich.; Creighton N. Guellow, from Sacramento, Calif., to Washington, D.C.; Irvin Holmes, from Lansing, Mich., to Washington, D.C.; Frank L. Merrill, from West Lafayette, Ind., to Washington, D.C.; Robert F. Schaak, from Harrisburg, Pa., to Orlando, Fla.; and Robert E. Straszheim, from Washington, D.C., to West Lafayette, Ind.

A WPA project sponsored by the Bureau of Agricultural Economics for the collection and tabulation of data on farm mortgages filed and released, farm land values and transfers, and farm taxes was completed on October 1 with the closing of the tabulation office in Chicago, Illinois. The work has been under the supervision of a Bureau committee comprised of Donald Jackson, Chairman, Eric Englund, Roy M. Green, F. J. Hughes, B. R. Stauber, and N. J. Wall. The tabulated data will be the subject for further research.

Professor R. L. Adams of the University of California is spending a sabbatical half-year studying the agriculture of the Mediterranean countries of Europe.

Mr. Edward A. Allen was appointed to the staff of Iowa State College as Assistant Professor in Economics. Mr. Allen received his Ph.D. from the University of Minnesota. His chief field of interest will be that of public utilities and highway finance.

Dr. R. H. Allen, formerly of the Resettlement Administration during the past half-year, has been assisting Professor J. D. Black of Harvard University, in completing some research studies of farm tenancy and the agricultural census, the results of which are appearing in current numbers of the Quarterly Journal of Economics and the Journal of the American Statistical Association.

Mr. Ben Anderson who took graduate work at the University of Minnesota last year has accepted a position with the Equitable Life Assurance Society.

Miss Ellen F. Anderson has been appointed an Assistant in Agricultural Economics at The Pennsylvania State College.

George H. Aull, Head of the Department of Agricultural Economics at the College of Agriculture, Clemson, South Carolina, and Harold Howe, Professor of Agricultural Economics at the Kansas State College, were granted Doctor's degrees in Agricultural Economics from the University of Wisconsin (1937).

Dr. O. E. Baker, of the Division of Farm Population and Rural Life, Bureau of Agricultural Economics, was honored by Heidelburg College, Tiffin, Ohio, at its commencement exercises on June 16, 1937, with the degree of Doctor of Science. Dr. Baker was also the recipient of an honorary doctorate conferred by George August University, Göttingen, Germany, in connection with the 200th anniversary of the founding of the university, June 27.

Mr. Ezra T. Benson, after a year of graduate work at the University of California, has returned to his position with the Extension Division of the University of Idaho.

Mr. Wayne Bitting, graduate of Illinois in 1933, who has done graduate work for two years at Iowa State College is associated with the Rice Branch of the Arkansas Experiment Station as Research Assistant.

Mr. R. H. Blosser was appointed on April 1 as research assistant in the Department of Rural Economics, Ohio State University. He will be located at Coshocton, Ohio in charge of the economic studies to be conducted on the Coshocton County Watershed in cooperation with the Bureau of Agricultural Economics and the Soil Conservation Service.

Mr. Howard Bonser, M. S., formerly with the Department of Agricultural Economics, The Pennsylvania State College, is now engaged in research and teaching at the University of Tennessee.

Assistant Professor Willard O. Brown and Mr. Perry V. Hemphill, Extension Economist, of the North Dakota Agricultural College, have been engaged in a study of cooperative associations in North Dakota, cooperating with the Bank of Cooperatives and the Cooperative Division of the Farm Credit Administration.

A. C. Bunce, who received his Ph.D. degree at the University of Wisconsin in June, has accepted a position of assistant professor in the Department of Agricultural Economics and Rural Sociology at the Iowa State College. He took his undergraduate work at the Saskatchewan University, and has had a number of years' experience in agriculture in the Orient.

David A. Burgoyne, who received his Master's degree at the University of Illinois in August, has accepted a position as Executive Secretary of the Utah State Experiment Station.

Mr. E. L. Butz, Instructor in Farm Management at Purdue University, was granted a Ph.D. degree in Agricultural Economics at Purdue University in June.

Mr. Elwyn L. Cady, of Iowa State College of Agriculture, who has been on a year's leave with the Bureau of Agricultural Economics, U. S. Department of Agriculture, to assist in the crop insurance studies of the Bureau, returned to his work at Ames, Iowa, October 1.

Professor John M. Cassels of Harvard University is continuing his case studies of metropolitan fluid milk markets, devoting the summer primarily to a study of the Baltimore and Chicago markets, with the assistance of Mr. P. A. O'Donnell.

Dr. M. P. Catherwood has been attending summer school at the University of Chicago. This fall he will be on sabbatical leave from Cornell University and will be studying at Columbia University on a Rockefeller Foundation Fellowship.

Dr. Siegfried von Ciriacy-Wantrup, Rockefeller Fellow from the University of Bonn and formerly at the University of Illinois is spending the fall semester at the Giannini Foundation, University of California, in a study of land use and conservation policies of the United States. Dr. Ciriacy-Wantrup holds the rank of Privat-Docent at the University of Bonn.

J. L. Charlton, who has been associated with Dr. Carl C. Taylor's research program in the Resettlement Administration Washington, D.C., has accepted a position in the Department of Rural Economics and Sociology at the University of Arkansas, and will be engaged in research in rural sociology.

Mr. Hsioh-Chu, who received his Master's degree at the University of Minnesota in June, has returned to China.

Carl M. Clark, a graduate student at the University of Wisconsin, has been appointed to the staff of the Department of Markets and Rural Finance at the University of Kentucky.

Mr. Marion Clawson has resumed his work in the Bureau of Agricultural Economics after a year of graduate study at Harvard University, and is stationed at Bozeman, Montana.

Dr. R. B. Corbett, Executive Secretary of the New England Research Council, has resigned to accept the position as Extension Director of the Connecticut State College, Storrs, Connecticut.

F. D. Cornell received the Ph.D. degree at Cornell University in June and has resumed his research work in Farm Management at the University of West Virginia.

W. M. Curtiss of Cornell University sailed in July for China via Europe to take a position with the Department of Agricultural Economics at the University of Nanking. Mrs. Curtiss accompanied him. The position was previously held for a year by Glenn Hedlund.

Mr. K. C. Davis, a graduate of the Department of Agricultural Economics, Oklahoma Agricultural and Mechanical College, has been appointed to serve as Agent and Collaborator with the Grade and Staple Estimates project, Bureau of Agricultural Economics and Department of Agricultural Economics, Oklahoma Agricultural and Mechanical College, cooperating. He fills the vacancy created by the resignation of Mr. C. B. Barre who accepted a position with the Resettlement Administration in Region 8.

S. W. Decker, former Associate in Fruit and Vegetable Marketing of the Agricultural Economics Department of the University of Illinois, has accepted a position as Associate Professor in the Department of Horticulture at Kansas State College. His place will be taken by V. A. Eckstrom, formerly with Ohio State University.

George Eastman resigned from a graduate assistantship at Cornell, July 1, to take a position with the Special Crops Section of the Agricultural Adjustment Administration.

Mr. Arval Erikson of the University of Idaho was appointed a research fellow at Iowa State College.

Mr. Leon M. Estabrook formerly Chief of the Bureau of Crop Estimates and later Associate Chief of the Bureau of Agricultural Economics, died at his home in Frederick, Maryland on August 14, after a long illness. Besides his service in the United States Government, beginning in the War Department in 1896, Mr. Estabrook was invited by the Argentine Government to organize a crop reporting service in that country, and for five years prior to 1930 was Director of the World Agricultural Census at the International Institute of Agriculture in Rome.

Mr. W. T. Ferrier has joined the staff of Agricultural Economics and Rural Sociology at Clemson Agricultural College as Associate Agricultural Economist. He will teach courses in marketing and farm management during the coming year and will carry on research in the South Carolina Experiment Station in the same fields.

Winn F. Finner, a graduate student in the Department of Agricultural Economics at the University of Wisconsin, has accepted a position as Assistant Economist in the Dairy Section of the Agricultural Adjustment Administration.

Mr. Richard J. Foote, who has been pursuing graduate work at Iowa State College the past two years, has accepted a position as economic analyst with the National Cooperative Milk Producers' Federation in Washington, D.C.

Professor J. L. Fulmer of Clemson Agricultural College was awarded the M.S. degree in Agricultural Economics at Cornell University at the spring commencement. Professor Fulmer has been awarded a General Education Board fellowship to the University of Virginia for the coming year and will be on leave of absence during that time.

Dr. John K. Galbraith of Harvard University has been awarded a Social Science Research Council fellowship and will spend the year in Europe studying financial policy as it relates to agricultural credit problems. He devoted the summer to continuation of his study of the Farm Credit Administration.

Mr. Austin G. Goth, who has been doing graduate work at Cornell University during the past two years, is now Extension Economist with the Agricultural Extension Division, West Virginia University.

R. E. L. Greene has returned to North Carolina State College from Cornell University where he took graduate study. Professor Greene will have general supervision of the research work in farm management in the Department of Agricultural Economics.

Joseph F. Hauck, who has been during the past year an Assistant at the New Jersey Agricultural Experiment Station, has accepted a position as Instructor with the Massachusetts State College of Agriculture.

Professor T. R. Hedges, in charge of prices in the Department of Agricultural Economics, Oklahoma Agricultural and Mechanical College, completed his work for the Ph.D. degree at the University of Illinois last summer.

F. F. Hedlund received the Ph.D. degree at Cornell University in June and is now connected with the Special Crops Section of the Agricultural Adjustment Administration.

Mr. L. F. Herrmann, Assistant in Agricultural Economics, West Virginia University, has been granted a three-month leave of absence for graduate study at the University of Minnesota.

Asher Hobson, Head of the Department of Agricultural Economics, University of Wisconsin, taught in the eight weeks summer session at Northwestern University.

Associate Professor John Hopkins, who has been on leave of absence during the past year directing the federal study on the effect of technological advances in agriculture upon the demand for agricultural labor, returned to his post at Iowa State College, September 16.

Mr. Donald C. Horton, Agricultural Economist in the division of Agricultural Finance, Bureau of Agricultural Economics, U.S.D.A. has been granted a year's leave of absence to teach economics at Brown University. Before coming to the Department of Agriculture, Mr. Horton was eco-

nomic analyst in the U. S. Department of Commerce and is author of the bulletin, Domestic Commerce Series—No. 96 entitled Long-Term Debts in the United States. In the Department of Agriculture, Mr. Horton has been engaged in farm mortgage research.

Mr. Clyde Howard, for the past two years Farm Management Demonstrator in the Extension Service, Montana State College, has resigned his position to do graduate work in Agricultural Economics at the University of Minnesota.

Mr. Neil W. Johnson, Division of Farm Management and Costs, Bureau of Agricultural Economics, is at Harvard University for the academic year.

Mr. Sherman E. Johnson has been appointed in charge of the Division of Farm Management and Costs, Bureau of Agricultural Economics, in place of Dr. C. L. Holmes who has relinquished leadership of the division because of ill health. Before coming to Washington in 1933 as wheat specialist with Brookings Institution, Mr. Johnson had been engaged in farm management teaching and research work in Minnesota, Louisiana, Montana and South Dakota. In 1934 he became a regional director in the Agricultural Adjustment Administration, in 1935 a regional director in Resettlement, and in April 1936 began research work in the Bureau of Agricultural Economics.

Mr. H. R. Josephson of the staff of the California Forest Experiment Station was granted the Charles Lathrop Pack fellowship in forestry at the University of California and is spending the year in graduate study in Agricultural Economics at the Giannini Foundation.

Mr. Alexander Joss has resigned from the University of Idaho to resume graduate work at Cornell University.

Professor G. W. Kuhlman, Oregon State Agricultural College, has been granted a year's leave of absence to complete the work for his Ph.D. degree at the University of Illinois.

Dr. Marc C. Leager, formerly on the staff of the School of Business and Science, North Carolina State College, has become a member of the staff of the Department of Agricultural Economics in the School of Agriculture and Forestry. Dr. Leager will devote his attention to research and teaching in farm fire insurance and farm finance.

J. Karl Lee, who has been during the past two years a graduate assistant at the University of Illinois, has accepted a position as Instructor in the Agricultural Economics Department of South Dakota State College.

Mr. B. C. Lemke, formerly in the Department of Economics at North Dakota University, was appointed to the staff of Iowa State College as Instructor in Accounting.

Dr. Charles P. Loomis, Division of Farm Population and Rural Life, Bureau of Agricultural Economics, has been given a grant-in-aid by the Social Science Research Council, to be used in completing a translation of Ferdinand Tönnies' "Gemeinschaft und Gesellschaft" (Community and

Society) and for an analysis of the author's perspective as related to the background of sociological theory influencing it. After taking part in the International Congress of Sociology in Paris, September 2–5, he went to Germany.

Mr. Howard H. Lord, who received his Master's degree in Agricultural Economics at Montana State College in June 1936, has been appointed Assistant Supervisor of Rural Research for Montana to work with Dr. C. F. Kraenzel, State Supervisor of Rural Research, under a cooperative arrangement with the Research Division of the WPA.

Mr. David MacFarlane who has been a research assistant at the University of Minnesota, is at Harvard this year.

Mr. Martin Maevers who has been for the past year instructor in the Department of Economics at the University of California at Los Angeles, has joined the staff of the California Forest Experiment Station, taking the place of Mr. H. R. Josephson who is on leave for the coming year.

Mr. Arthur Mauch, Instructor in Farm Management at Purdue University, joined the Farm Credit Administration staff at Louisville to conduct a cooperative research study.

Associate Professor Benjamin V. McCaul of the North Dakota Agricultural College has been granted a one-year leave of absence to engage in work in the Division of Supervision and Maintenance of Farms of the Federal Land Bank, St. Paul, Minnesota. Don Keene, formerly of Iowa State College, is to take his place.

Miss Ruth B. McIntosh, who received the Master's degree in Agricultural Economics at Montana State College in June 1937, is now Assistant Regional Director, Division of Statistics, Social Security Board, Denver.

John G. McNeely, a graduate student at the University of Wisconsin, has been appointed Instructor in the Department of Rural Economics and Sociology at the University of Arkansas.

Professor Cap E. Miller, Head of the Department of Agricultural Economics, North Dakota Agricultural College, assisted in arrangements for the annual tour of the Northwest Farm Managers Association, July 16–18, in northeastern North Dakota and northwestern Minnesota. Professor Miller is secretary-treasurer of the association.

Mr. Alva M. Myers, Assistant Economist in the Resettlement Administration and formerly a graduate student in the Graduate School of the University of Missouri, has been assigned back to Missouri to assist in completing a detailed land classification analysis of Callaway County, Missouri. This work is being carried on in cooperation with Dr. C. H. Hammar of the Department of Agricultural Economics of the University of Missouri, who inaugurated the work more than a year ago.

Mr. P. K. Norris, Foreign Agricultural Service, Bureau of Agricultural Economics, who has been studying cotton production in India and East Africa, has returned to headquarters from China where his stay was cut short by hostilities in Shanghai.

A. L. Owen, a former member of the Agricultural Economics Staff at the University of Illinois, has accepted a position in New York with the Equitable Life Assurance Society.

After receiving his Ph.D. degree at Cornell University in June, M. S. Parsons left to take a position with the Farm Credit Administration.

Mr. E. B. Poling has been appointed research assistant in the Department of Rural Economics, Ohio State University.

Anson Pollard has had one term of graduate study at Cornell University and has accepted a research fellowship at the Vermont Agricultural Experiment Station.

Benjamin D. Raskopf, who did graduate work at California and Tennessee, has been appointed Assistant Agricultural Economist and Rural Sociologist, University of Tennessee, in cooperation with the Federal Bureau of Agricultural Economics.

Mr. E. J. Rowell, Division of Economic Information, Bureau of Agricultural Economics, has been transferred to Washington, D.C. from Boston, Mass., where he was for many years director of the New England Radio News Service, presenting market news over the radio. Mr. John E. Meyers, who has been assistant to Mr. Rowell at Boston during the last two years has been appointed acting director of the New England Radio News Service.

Mr. Ralph Russell of the Department of Agricultural Economics, University of Maryland, is on leave of absence for the fall semester to make a study of rural credit unions for the Farm Credit Administration.

Mr. Bryce Ryan formerly of Texas and Washington, who has been pursuing his studies at Harvard University during the past year, has joined the staff of Iowa State College as Instructor in Sociology.

Mr. George A. Sallee has obtained an extension of leave from the University of Minnesota until January 1 in order to complete his work on the study of labor requirements of agriculture.

George T. Schaefer has been appointed Instructor in Agricultural Economics at the University of Idaho. His graduate work was taken in the Department of Agricultural Economics, University of Wisconsin.

Dr. W. Bruce Silcox has resigned his position as Extension Economist at the University of Minnesota and has joined the staff of the Extension Service, U. S. Department of Agriculture.

Mr. Chester Smith, M.S., Massachusetts State College 1937, has been appointed Leader of Program Planning in the Extension Service and will assist in the organization and direction of the county program planning of the AAA in Massachusetts.

Dr. Estal E. Sparlin, who has been associated with the University of Missouri and the Resettlement Administration, will become a member of the staff of the Department of Rural Economics and Sociology at the University of Arkansas, September 1, 1937, to be engaged in research work pertaining to state and local government and taxation.

Elsworth Springer, a research assistant in the Department of Agricultural Economics of the University of Missouri, working on Bankhead-Jones pasture farming studies, recently resigned and his place was filled by Mr. Homer L'Hote, a graduate student in agricultural economics.

Mr. Fred Taylor, Foreign Agricultural Service, Bureau of Agricultural Economics, returned to Europe in September for further study of the false packing of American cotton bales. Most of the complaints against American cotton on arrival at milling centers abroad have been found to have had no connection with intent to defraud but were the result of natural causes.

Mr. Tyrus R. Timm, Assistant Agricultural Economist at State College, New Mexico, has transferred from the Experiment Station staff to the Extension Service of the same institution. Mr. Robert Melcher, who last year was Assistant Professor of Agricultural Economics with the Alabama Polytechnic Institute at Auburn, Alabama, has been elected to fill the position vacated by Mr. Timm.

Mr. John Timmons, who completed the requirements for the Bachelor's degree in Agriculture in 1937 has been appointed a graduate assistant in the Department of Agricultural Economics of the University of Missouri for the coming year.

An arrangement has been entered into between the University of California and the California State Department of Agriculture under which the University assumes the direction of the research necessary for the establishment of resale prices under the recently enacted milk control act. Dr. J. M. Tinley has been assigned to the job of directing this research.

Mr. Gerhard Tintner of the Cowles Commission for Research in Economics, Colorado Springs, will join the staff of the Department of Economics and Sociology at Iowa State College, as Assistant Professor in Economics and Mathematics. Mr. Tintner received his training chiefly on the Continent, receiving his Ph.D. from Vienna University. He also studied at the London School of Economics and at several of the American universities, working in the fields of mathematics, statistics and economics.

Dr. W. C. Waite, Professor of Agricultural Economics, University of Minnesota, spent part of the summer as Economic Advisor to the Provincial Government of Alberta in the preparation of a brief for the Royal Commission of Inquiry into Financial Relations between the Dominion and the Provinces.

Mr. Ih Chiao Wang has returned to his position in China after completing work for his Master's degree at the University of Minnesota.

Mr. Andrew E. Watson has been appointed Assistant Agricultural Economist at the Maine Agricultural Experiment Station for the coming fiscal year. He is devoting his time to a cooperative study of dairy organization and adjustments in cooperation with the Bureau of Agricultural Economics at Washington, D.C.

Dr. H. R. Wellman of the University of California is spending about a month in Washington with the General Crops Section working on the de-

veloping of a research project relating to the analysis of the California-Arizona Orange and Grapefruit Marketing Agreement.

Carl F. Wehrwein, who has been with the Resettlement Administration at Washington, D.C., returns to the University of Wisconsin where he resumes his regular position. While with the Resettlement Administration, Mr. Wehrwein was engaged upon a study of the problem of adjustment of taxes upon the lands acquired by the Resettlement Administration.

Professor R. B. Westbrook who has been with the Agricultural Economics Department of South Dakota State College since the spring quarter of 1934 has been granted leave of absence to complete the work for his Ph.D. degree at the University of Minnesota during the coming year.

Mr. William R. Whitacre, formerly State Director of Rural Rehabilitation for the Resettlement Administration in Pennsylvania, has resigned to enter research work in Agricultural Economics at Pennsylvania State College. This year he is conducting research in potato marketing.

B. O. Williams, Professor of Rural Sociology and Statistics, The Clemson Agricultural College, taught courses in Rural Sociology in the summer school at the University of Kentucky during June and July.

John E. Wills, who received his Ph.D. degree at the University of Illinois, June, 1937, has been appointed Associate Professor of Agricultural Economics and Rural Sociology, University of Tennessee.

After completing the work for his Ph.D. degree at Cornell University, H. Yang returned to Hankow, China to resume the position he held formerly with the Cotton Industry Commission, National Economic Council of China.

Mr. Dudley E. Young, B.S. Kansas State College, M.S. Montana State College, is now employed by the Cooperative Division, Farm Credit Administration, Spokane.

Dr. E. C. Young, Professor of Farm Management at Purdue University, served on the Summer School staff at the University of Kentucky.

Mr. C. O. Youngstrom has been granted a year's leave of absence from the University of Idaho to do graduate work at the University of California where he has been granted a fellowship.

In order to promote professional improvement on the part of Extension Service workers several special courses were organized and presented during the Summer Session 1937 at Colorado State College. Dr. George S. Wehrwein, Professor of Economics at the University of Wisconsin, gave two courses: (1) Land Utilization, which carried undergraduate and graduate credit; and (2) a Land-Use conference for the benefit of extension agents on a non-credit basis. Some 60 or more men registered for the first course and the attendance at the afternoon conference included 50 to 70 persons during the three-week period. The interest shown in this enterprise during the current summer will undoubtedly mean that a similar program will be offered for extension workers next year.

The Department of Economics and Sociology at the Colorado State College of Agriculture and Mechanic Arts will have charge of courses in history beginning September 1, 1937. Heretofore the history work has been given in the Department of English. Dr. Robert Dunbar, who was associated with the University of South Dakota at Vermillion, has been appointed as assistant in history.

Connecticut State College devoted one day of its Farmers' Week to a conference on agricultural policy, in which the discussion was led by Dr. Charles A. Beard, Professor John D. Black, and Professor I. G. Davis.

Undergraduate and graduate courses in rural sociology will be offered in the University of Georgia's College of Agriculture beginning with the 1937–38 session. The name of the department has been changed to Agricultural Economics and Rural Sociology. The teaching staff of this department consists of Professor J. William Firor, Head of the Department and Professor of Agricultural Economics, Doctor Wade P. Young, Associate Professor of Rural Sociology, Doctor B. D. Tillett, Associate Professor of Farm Management, and two assistant instructors to be appointed. The subject matter of the department will now include rural sociology, general economics of agriculture, farm management, farm prices and farm credit.

A number of institutions are represented by the appointments of graduate assistants on the Giannini Foundation of the University of California: Howard E. Conklin, Cornell University 1937; Elbert Heaton, Utah State Agricultural College 1937; Charles N. Lane, Cornell University 1932, recently with the Land Planning Section of Resettlement stationed in Vermont; Weston W. Taylor, Utah State; Carol O. Youngstrom, Extension Economist at the University of Idaho on leave for a year of graduate work at California. Donald F. McMillen, University of Illinois 1936, and W. W. Pawson, State College of Washington 1933, who were on appointment last year will continue toward their Master's degree. Alyce V. Williams returned to the University of California to complete her graduate work after a year spent at Harvard University.

The following men have accepted graduate assistantships in the Department of Agricultural Economics and Farm Management at Cornell University for 1937–38:

Becker, Clare M. (Michigan), Bratton, C. Arthur (Ohio), Buchanan, Mark T. (Missouri), Coffey, Frederic A. (Texas), Ferguson, Donald B. (Illinois) Summer 1937, Joss, Alexander (Washington), Lutz, Edward A. (New York), Russell, Sargent (Maine) Summer 1937, Schmutz, D. Clarence (Utah), Woodin, Martin D. (Louisiana).

The following were appointed graduate assistants in the Department of Agricultural Economics of the University of Illinois for the coming year: Elvin A. Duerst, Oregon State Agricultural College; G. W. Freemyer, Purdue; M. P. Gehlbach, University of Illinois; B. R. Hurt, who is returning from Harvard; C. L. Loomis, Louisiana State University; E. N. Searls, University of Illinois; Ned O. Thompson, Kansas State Agricultural College; F. G. Warren, Purdue.

Mr. William Kling, B. S., College of the City of New York, and Malcolm Butler, B. S., Massachusetts State College, will be the half-time laboratory assistants in the Department of Agricultural Economics at Massachusetts State College this year.

Mr. Gerald Engelman of Iowa and Mr. William Newman have been appointed research assistants at the University of Minnesota.

The following have received fellowships for graduate study in the Department of Agricultural Economics, Montana State College, for the school year 1937–38: John C. Bower, B. S. Washington State College; Willard W. Cochrane, B. S. University of California; Harold G. Halcrow, B. S. North Dakota State College; Leon C. Michaelsen, B. S. Utah State Agricultural College.

Ralph H. Gray, graduate of Oklahoma A. and M., and Ben T. Lanham, Jr., graduate of Clemson Agricultural College, have been appointed to graduate assistantships in the Department of Agricultural Economics and Rural Sociology, University of Tennessee.

The following have been appointed as part time research assistants in the Department of Agricultural Economics, University of Wisconsin, for the academic year 1937–38: Max Beal, University of Idaho; Elmo Eke, University of Wisconsin; Carl P. Heisig, State College of Washington; Scott Keyes, Pennsylvania State College; John L. Liles, University of Illinois; Charles W. Loomer, South Dakota State College; A. Norman Nybroten, University of Wisconsin; J. Lloyd Spaulding, Iowa State College; Melvin L. Upchurch, University of Texas.

PROGRAM FOR ANNUAL MEETING

The program for the twenty-eighth annual meeting to be held at the Chalfonte-Haddon Hall, Atlantic City, New Jersey, December 28–30, 1937, is printed on the following pages.

A considerable number of the members who so generously contributed suggestions for the program, indicated that they believed it desirable to have greater opportunity for general discussions. In accord with these suggestions, the number of papers and formal discussions scheduled for each session has been limited and participants have been requested to observe the time limits. The success of this plan depends upon the extent to which those attending the meetings take advantage of the opportunity thus provided for general discussion. It is hoped that it may be given a thorough trial so that the results will supply a helpful guide to those responsible for the development of future programs.

PROGRAM FOR THE TWENTY-EIGHTH ANNUAL MEETING OF THE AMERICAN FARM ECONOMIC ASSOCIATION

CHALFONTE-HADDON HALL, ATLANTIC CITY
DECEMBER 28–30, 1937

TUESDAY, DECEMBER 28

Tuesday Forenoon

10:00 A.M. *Group Control and Agriculture*

Chairman: M. J. B. Ezekiel, U. S. Department of Agriculture.
"Business Combinations and Agriculture"
Gardiner Means, National Resources Committee.
"Prices and the Agricultural Problem"
Don S. Anderson, University of Wisconsin.
Discussion: R. S. Vaile, University of Minnesota
H. J. Stover, Farm Foundation, Chicago.

Tuesday Afternoon

2:30 P.M. (1) *Farm Programs*

Chairman: I. G. Davis, Connecticut State College.
"The Economics of the Ever-Normal Granary"
Joseph S. Davis, Food Research Institute.
"Evaluation of Crop Insurance Possibilities"
Roy M. Green, Bureau of Agricultural Economics.
Discussion: O. V. Wells, Agricultural Adjustment Administration
H. B. Rowe, Brookings Institution.

2:30 P.M. (2) *Agricultural Credit*

Chairman: Nils Olsen, Equitable Life Assurance Society.
"Flexibility in the Repayment of Farm Loans"
F. F. Hill, Farm Credit Administration.
"The Place of Commercial Banks in Agricultural Finance"
Norman J. Wall, Bureau of Agricultural Economics.
Discussion: S. F. Westbrook, Aetna Life Insurance Company
E. C. Johnson, Farm Credit Administration.

2:30 P.M. (3) *Internal Barriers to Trade in Farm Products*

Chairman: H. B. Price, University of Kentucky.
"Indirect Restrictions to Internal Trade"
F. V. Waugh, Bureau of Agricultural Economics.
"Market Prorates as Restrictions on Internal Trade"
H. E. Erdman, University of California.
Discussion: M. P. Rasmussen, Cornell University
B. A. Holt, Agricultural Adjustment Administration.

Tuesday Evening

8:00 P.M. *Objectives in National Agricultural Policy*

Chairman: E. G. Nourse, Brookings Institution.
Papers by
H. R. Tolley, Agricultural Adjustment Administration.

B. H. Hibbard, University of Wisconsin.
Discussion: G. F. Warren, Cornell University
J. D. Black, Harvard University.

WEDNESDAY, DECEMBER 29

7:30 A.M. *Group Breakfasts*

Cornell group, P. S. Williamson in charge
Illinois group, M. H. Hunter in charge
Minnesota-Harvard group, Curtis Mumford in charge
Wisconsin group, H. N. Reist in charge

Wednesday Forenoon

10:00 A.M. (1) *Farm Management*

Chairman: J. I. Falconer, Ohio State University.
"Farm Management Aspects of Soil Conservation"
H. C. M. Case, University of Illinois.
"Soil Conservation in European Farm Management"
Siegfried von Ciriacy-Wantrup, University of Bonn.
Discussion: C. W. Crickman, Bureau of Agricultural Economics
W. J. Roth, Soil Erosion Service.

10:00 A.M. (2) *Marketing*

Chairman: J. F. Booth, Department of Agriculture, Ottawa.
"The Future of Milk Control"
John Cassels, Harvard University.
"Western Cream in Eastern Markets"
Leland Spencer, Cornell University.
Discussion: C. G. McBride, Ohio State University
Harry Trelogan, University of Minnesota.

10:00 A.M. (3) *Agricultural Exports*

Chairman: Asher Hobson, University of Wisconsin.
"Trade Agreements and Agriculture"
L. F. Edminister, Department of State.
"Outlook for Agricultural Exports"
L. A. Wheeler, Bureau of Agricultural Economics.
Discussion: R. R. Renne, Montana State College
H. S. Patton, Michigan State College.

Wednesday Noon

12:30 P.M. Joint Luncheon with Rural Section, American Sociological Society.
Chairman: G. H. Von Tungeln, Iowa State College.
"Disadvantaged Rural Classes"
L. C. Gray, Bureau of Agricultural Economics.
Discussion: Carle Zimmerman, Harvard University.

Wednesday Afternoon

2:30 P.M. (1) *Farm Tenancy*

Chairman: E. C. Young, Purdue University.
"What Should be Done About Tenancy"

H. C. Taylor, The Farm Foundation, Chicago.
"Problems of the Share Cropper"
C. O. Brannen, University of Arkansas.
Discussion: A. G. Black, Bureau of Agricultural Economics
T. Lynn Smith, Louisiana State University.

2:30 P.M. (2) *Industrial Outlets for Agriculture*

Chairman: M. M. Daugherty, University of Delaware.
"Prospects for Industrial Uses of Farm Products"
H. E. Barnard, The Farm Chemurgic Council.
"Economic Aspects of Industrial Outlets for Agriculture"
T. W. Schultz, Iowa State College.
Discussion: F. L. Thomsen, Bureau of Agricultural Economics
J. E. Lattimer, Macdonald College.

2:30 P.M. (3) *Land Policy*

Chairman: M. L. Wilson, Under Secretary of Agriculture.
"Goals in Land Use Policy"
G. S. Wehrwein, University of Wisconsin.
"Goals in Conservation Policy"
W. E. Grimes, Kansas State College.
Discussion: C. F. Clayton, Bureau of Agricultural Economics
F. F. Elliott, Agricultural Adjustment Administration.

Wednesday Evening

8:00 P.M. Round Tables.

1. *Definitions in Farm Management*
In charge of Association's Committee on Definitions in Farm Management.
Chairman: H. M. Dixon, U.S.D.A. Extension Service
Wm. Allen, University of Saskatchewan
C. W. Crickman, Bureau of Agricultural Economics
G. W. Forster, North Carolina State College of Agriculture
Elmer Starch, Montana State College
R. H. Wilcox, University of Illinois
P. S. Williamson, Cornell University

2. *Marketing*
In charge of Association's Committee on Marketing.
Chairman: F. V. Waugh, Bureau of Agricultural Economics
H. B. Price, University of Kentucky
H. B. Rowe, Brookings Institution
T. W. Schultz, Iowa State College
W. C. Waite, University of Minnesota
H. R. Wellman, University of California

3. *Agricultural Income*
Chairman: O. C. Stine, Bureau of Agricultural Economics
G. W. Forster, North Carolina State College of Agriculture
G. M. Peterson, University of California
J. B. Rutherford, Dominion Bureau of Statistics
E. J. Working, University of Illinois

4. *Can Land Booms be Avoided?*

Chairman: Wm. Murray, Iowa State College
A. A. Dowell, University of Minnesota
R. C. Limber, Metropolitan Life Insurance Co.
E. H. Thomson, Farm Credit Administration, Springfield, Mass.

5. *The Agricultural Census Schedule*

In charge of the Association's Committee on the Census.
Chairman: M. R. Benedict, University of California
J. D. Black, Harvard University
F. F. Elliott, Agricultural Adjustment Administration
Asher Hobson, University of Wisconsin
T. Lynn Smith, Louisiana State University
O. C. Stine, Bureau of Agricultural Economics
F. P. Weaver, Pennsylvania State College
G. S. Wehrwein, University of Wisconsin
C. F. Sarle, Bureau of Agricultural Economics

6. *Land Use in the Northeast*

Chairman: Leonard A. Salter, Jr., Land Use Planning Specialist, Connecticut
V. L. Hurlburt, Land Use Planning Specialist, Pennsylvania
A. T. M. Lee, Land Use Planning Specialist, New Jersey
H. C. Woodworth, University of New Hampshire

THURSDAY, DECEMBER 30

Thursday Forenoon

9:00 A.M. Business Meeting.

10:30 A.M. (1) *Monetary Policies and Agriculture* (Joint session with American Statistical Association).
Chairman: M. S. Szymczak, Member Board of Governors, Federal Reserve System
"Present Federal Reserve Policies"
Melchior Palyi, University of Chicago
"Inflation and the Farmer"
Louis H. Bean, Agricultural Adjustment Administration.
Discussion: Arthur R. Upgren, University of Minnesota
Fred L. Garlock, Bureau of Agricultural Economics.

10:30 A.M. (2) *Rural Electrification*

Chairman: O. G. Lloyd, Purdue University
"Rural Electrification: Progress and Future Prospects"
John M. Carmody, Administrator, Rural Electrification Administration.
"Economic Aspects of Rural Electrification"
Harold E. Pinches, Connecticut State College.
Discussion: W. E. Keepper, Cornell University
R. S. Kifer, Bureau of Agricultural Economics.

Thursday Noon

12:30 P.M. Annual Luncheon. (Speaker to be announced)

Thursday Afternoon

2:30 P.M. Meeting of Executive Committee.

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